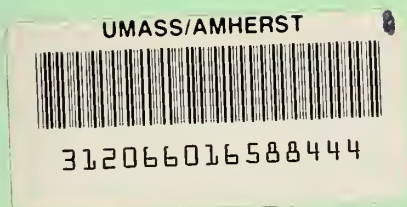
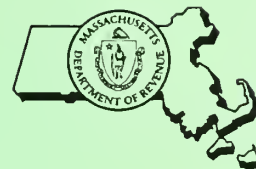


MASS. R3.2:L95



Massachusetts Department of Revenue Division of Local Services
Mitchell Adams, Commissioner Joseph J. Chessey, Jr., Deputy Commissioner



GOVERNMENT DOCUMENTS
COLLECTION

SEP 01 1998

University of Massachusetts
Depository Copy

Lowell Public Schools Review

Executive Order 393

Education Management Accountability Board Report
March, 1998

EDUCATION MANAGEMENT ACCOUNTABILITY BOARD

Michael Sentance, Chairperson
William Dandridge
Andres Lopez
Peter Nessen
Ted Owens
Mark Roosevelt
Hugh Scott
Alison Taunton-Rigby
Samuel Tyler
Brooke White-Sandford

ACKNOWLEDGEMENTS

Administration & Finance
Charles Baker, Secretary
Kristen Keel, Chief of Staff

Massachusetts Department of Revenue
Mitchell Adams, Commissioner
Joseph J. Chessey, Jr., Deputy Commissioner
James R. Johnson, Director of Accounts

Table of Contents

I.	INTRODUCTION
II.	EXECUTIVE SUMMARY
	Findings
	Background
	Scope of Review
III.	GENERAL CONDITIONS AND FINDINGS
1.	Lowell Overview
2.	School Finances
3.	School Committee Budget Trend
4.	Total School District Expenditures
5.	Net School Spending Requirements
6.	School Committee Program Budget
7.	Foundation Budget
8.	Staffing - FTE Trends
9.	Payroll - Salary levels, Union Contracts
10.	Professional Development Program
11.	School Improvement Plans
12.	Time and Learning
13.	Courses and Class Sizes
14.	Technology and Computers
15.	Supplies and Textbooks
16.	Test Scores
17.	Hiring and Evaluation of Teachers and Principals
18.	Accounting and Reporting
19.	Review of Expenditures
	SIGNIFICANT EDUCATION MILESTONES AND ISSUES
20.	High School Accreditation
21.	Transiency
22.	Voluntary Desegregation
23.	Special Education (SPED)
24.	Transitional Bilingual Education
	FINDINGS OF BEST PRACTICES
25.	Planning Process
26.	School Building Program
27.	Drop-out Prevention and Recovery Program
IV.	EMPLOYEE SURVEY
V.	SUPERINTENDENT'S STATEMENT
VI.	APPENDIX

I. INTRODUCTION

The Education Reform Act of 1993 has two major goals: to achieve adequate funding for all local and regional school districts over a seven-year period; and to bring equity to local taxation efforts based on a community's ability to pay. In February 1997, Governor Weld issued Executive Order 393 to evaluate the education reform program that was nearing the end of its fourth year. Beginning in FY98, Chapter 70 state aid for education will reach \$2.289 billion, an increase of \$856 million over the FY94 figure of \$1.433 billion. With an investment of this magnitude in the Commonwealth's schools it is critical to "review, investigate and report on the expenditures of funds by school districts, including regional school districts, consistent with the goals of improving student achievement." To that end, Executive Order 393 established an Educational Management Accountability Board (EMAB).

The Secretary of Administration and Finance, serving as chief of staff to the EMAB, selected a team of auditors from the Department of Revenue's (DOR) Division of Local Services to conduct the school district reviews. DOR's Director of Accounts is the chief investigator with authority to examine city and school department accounts and transactions (M.G.L. Ch. 44, Secs. 45 and 46A). The reviews are being conducted in consultation with the State Auditor and the Commissioner of Education.

Lowell is one of the first three school districts to be reviewed under Executive Order 393. Lowell municipal and school officials cooperated fully with the review team. Three DOR auditors conducted the field review of the Lowell Public Schools (LPS) in August and September, 1997. Included in this review are the results of a confidential survey of employees of the school district.

The following paragraphs include some of the more significant findings of the Lowell Public Schools' review. When possible, the team has identified and presented best practices which may be adopted by other school districts if deemed helpful. The report discusses all results, best practices and deficiencies, if any, identified in this section, in greater detail in the "General Findings and Conditions" section.

The findings are grouped into several broad categories which are addressed in the Education Reform Act: the Foundation Budget, Student Achievement, Governance and Management Powers, Teacher/Student Staffing, Teacher Compensation, Professional Development, Time and Learning, District Issues, and Best Practices.

II. EXECUTIVE SUMMARY

Findings

THE FOUNDATION BUDGET

- Lowell is meeting its basic overall financial obligations as established by the Department of Education (DOE). Lowell has exceeded its required net school spending requirements for FY94 through FY96 by a small percentage, but has filed a report for FY97 indicating that net school spending (NSS) requirements have not been met for that year. The district received \$40.9 million in FY94 in Chapter 70 state aid. By FY97 that figure had risen to \$70.9 million. Lowell has received a total of \$218 million in state aid over the FY94-FY97 period as a result of the Commonwealth's investment in education reform. When taking into account inflation, the LPS has seen real budget increases from FY89 to FY97. [See sections 3 and 5]
- The foundation budget does not mandate spending in any specific category as it sought to provide local communities the latitude to address local needs. However, in order to encourage appropriate levels of spending, M.G.L. Ch. 70 section 9 requires that a school district report to the Commissioner of Education when it has failed to spend the amounts incorporated in the foundation budget for several categories: professional development; textbooks; extended/expanded programs; and extraordinary maintenance. For FY96 alone, Lowell reported spending only 53 percent of the foundation target for professional development, 71 percent for textbooks and equipment, and 0 percent for extraordinary maintenance and expanded programs. [See section 7 and Appendix B]. The district did not file any of the reports for FY94-FY96, as required by law, nor did DOE direct LPS to submit such reports.
- Lowell's increased funding has also been used to fund substantial increases in special education and transitional bilingual program expenditures. [See sections 7, 23, 24 and Appendix B]. The increases in special education expenditures across the state and its concomitant impact on other school programs has been noted in reports by the Massachusetts Taxpayers Foundation, the Foundation Budget Review Commission, the Massachusetts Association of School Superintendents and the recent legislative Commission on Special Education.

STUDENT ACHIEVEMENT

- An analysis of the Massachusetts Educational Assessment Program (MEAP), the state's educational testing program from 1988-96, shows no real improvement. The scaled scores for fourth and eighth grade students show little or no improvement in any subject area while the scaled scores for tenth graders show slight improvement. Test results for the new statewide Iowa tests indicate that only 51 percent of Lowell third graders scored at the more advanced

skill levels of either “proficient” or “advanced.” This is lower than the statewide average of 75 percent at these skill levels. Lowell’s 10th graders scored at the 47th percentile in the achievement test when compared to a representative national sample of students. Only the California Achievement Tests show some evidence of improvement over the 1995-1997 period. [See section 16, Appendix C and D].

GOVERNANCE AND MANAGEMENT POWERS

- Principals in Lowell received pay raises in accordance with a salary schedule based on academic degree attained and type and size of school, indicating that performance was not heavily considered in compensation decisions. [See section 17] The Education Reform Act removed principals from collective bargaining units to give superintendents more leverage in motivating the performance of principals. New management tools were given to superintendents to facilitate school-based improvement. There is no evidence that they have been utilized in Lowell.

TEACHER/STUDENT STAFFING

- Lowell has used the increased investment to expand staffing well above the levels reached in the late 1980’s. The number of teachers increased by 263 between FY93 and FY97. This increase has resulted in a decline in the student/teacher ratio, a positive trend for educational achievement and an appropriate use of the education reform funds. (See section 8)

TEACHER COMPENSATION

- Between FY93 and FY96, the expenditure for teachers’ salaries rose 53.7 percent reflecting increases for new staff as well as raises in the teachers’ contract. The average teacher salary rose 22.5 percent from FY93 to FY96, three times as fast as the inflation rate of 7.5 percent. By the end of this period, the expenditure for teacher salaries had increased from 45.6 percent to 50.1 percent of school expenditures. However, with Lowell teacher salaries still slightly below the state average, these expenditure levels are not extraordinary. (See section 9)

PROFESSIONAL DEVELOPMENT

- The Lowell Public Schools has instituted a professional development program which includes a contract with the University of Massachusetts in Lowell (UMASS-Lowell) to provide educational services. A monthly “Leadership Academy” is held for administrators and principals which includes lectures, workshops and training sessions in a variety of educational areas. LPS reported increasing its spending on professional development from \$0.5 million in FY95 to \$1.0 million in FY97. (See section 10)



Digitized by the Internet Archive
in 2014

<https://archive.org/details/lowellpublicscho00mass>

TIME AND LEARNING

- The LPS developed a time and learning plan to meet Department of Education requirements for the 1997-98 school year. However, contract negotiations with the teachers' union were still ongoing when the 1997-98 school began and LPS found it necessary to request a waiver from DOE to delay implementation of that requirement temporarily. [See section 12]

DISTRICT ISSUES

- The Board of Education approved Lowell's voluntary desegregation and educational equity plan in 1987. According to school officials, the plan features an assignment plan that provides parents with a choice of schools, promotes racial balance in the district's schools, and provides mechanisms and processes for individual school improvement, parent information, and increasing staff diversity.
- With a non-white student population of over 50 percent, the Lowell Public School system entered into a voluntary desegregation agreement in 1987 and has operated under that agreement since then.

BEST PRACTICES

- By law each school in a district must establish a school council which must develop a school improvement plan each year. The overall school improvement planning process and management oversight appears well planned and structured. Directions are clear and require measurable objectives along with financial information and timetables. Noteworthy is the requirement that each plan is to include an addendum to address test scores and steps to improve them. Central administration staff monitors the progress of implementation through on-site visits
- Lowell has undertaken a major school construction and renovation program totaling \$171 million. Even with a 90 percent state reimbursement, there has been a considerable financial commitment by Lowell to improve its school facilities. Upon completion of the \$40 million high school renovation now in progress, Lowell will have built ten new schools and renovated five. Many of these facilities now have state of the art equipment and laboratories, especially the libraries, media centers and computer laboratories. The renovation at the high school will provide a television studio as well as meeting and conference facilities for teachers. Especially noteworthy is the apparent foresight to include in the high school renovation ample space for teachers' study and work areas and facilities designed for professional development and training activities.
- Lowell has instituted a drop-out prevention and recovery program that includes a partnership with Middlesex Community College in Lowell to provide on-campus counseling and secondary school courses. At the high and middle schools an effort has been made to identify students who are considered likely to drop out. This program attempts to reduce the drop-out rate through counseling and by offering alternative school settings in adult education. LPS'



first program in a separate setting has become a charter school in its own right. As a result of these efforts, Lowell's 2.6 percent drop-out rate is well below the 3.4 percent state average and significantly lower than the rates of other urban school systems such as Boston (7.2 percent), Brockton (7.3 percent), Lawrence (6.4 percent), and Worcester (7.5 percent).

AUDITEE'S RESPONSE

The audit team held an exit conference with the Superintendent on November 25, 1997 to provide LPS with a copy of the draft audit report and to review the general findings. The team invited LPS to suggest specific technical corrections and make a formal written response to the report. A follow-up meeting was held on December 10, 1997. In his response dated January 27, 1998, Superintendent George Tsapatsaris states: "We find the report to depict accurately our school system's strengths, accomplishments, and weaknesses. The report reinforces our priorities and helps us as we review areas that need strengthening so that we may better meet the educational needs of all our children."

Background

Lowell is the fourth largest city in the Commonwealth. According to the last US Census, in 1990, the city's population was 103,439, a significant increase from the 94,979 figure of 1988. Due in part to an economic downturn in the early 1990's, the population has decreased to 96,054 in 1994. Lowell's public school system consists of 29 schools with a total enrollment of 15,847 as of October, 1996. Enrollment has increased by 2,264 students or 16.7 percent over the 1990 enrollment figure of 13,583.

Like many Massachusetts school districts, Lowell faced budgetary pressures in the early 1990's as a result of an economic recession and the associated decline in state aid for education and municipal financial contributions to schools. Consequently, Lowell experienced a budget reduction in FY92 and found it necessary to reduce the number of teachers and curtail certain educational programs.

Due largely to an influx of Asian immigrants in the 1980's, Lowell's non-white student population makes up more than 50 percent of students. To address the issue of racial balance in schools, Lowell adopted a voluntary desegregation plan in 1987 to develop student assignment and transfer plans to eliminate racial imbalance. A parent information center created at that time still serves today as the central enrollment office for all new students coming into elementary and middle schools.

With a non-white student population in excess of 50 percent and its approved voluntary desegregation plan, Lowell qualified for 90 percent state funding for school construction projects.

Taking advantage of this funding mechanism, Lowell moved ahead to build seven new elementary schools and three new middle schools. Another five schools were renovated and the high school is currently undergoing a \$40 million renovation. Total school construction costs for these projects are approximately \$171 million.

Since FY92 when its budget was cut, it is apparent that Lowell has made a significant effort to improve its schools and programs with the assistance of education reform related funding beginning in FY94.

Having largely completed its construction program in the middle and elementary schools, Lowell decided to restore teaching positions and to address program issues related to education reform. It embarked on a course to reduce student/teacher ratios by hiring 263 teachers between FY93 and FY97. With an emphasis on technology, it purchased over 2,000 computers and put a computer teacher and a science teacher into each school, including elementary schools. Staffing for core subjects such as English, mathematics, social studies and science was increased significantly. Art and music programs were restored with a notable increase of teachers in these areas between 1993 and 1997.

Lowell also needed to address issues related to the high school. In 1995 an accreditation report, with 217 recommendations for improvements, was issued placing the high school on a "warning status". The major renovation project in the high school was in part due to the findings of the accreditation committee which noted generally that the high school appeared to have been neglected in comparison to the elementary and middle schools.

From the financial perspective of education reform, Lowell has met its net school spending requirement through FY96. Clearly, Lowell schools have benefited financially from education reform. The combination of state aid and municipal funding has boosted net school spending targets from \$61.5 million in FY94 to \$94.5 million in FY97, a 53.7 percent increase. School spending reached its all time high in FY97 both in actual dollars and when adjusted for inflation. However, at the same time, it appears that Lowell has not met its FY97 net school spending requirement, as it filed an End of Year Pupil and Financial Report (End of Year report) with the Department of Education reporting that its actual spending may be as much as \$1.7 million under target.

The school district's student profile presents challenges educationally and financially. These challenges include a student population comprised of a high percentage of students for whom English is a second language (47.9 percent). Eighteen (18) percent of all students have only limited English proficiency. The non-white student population is 54.8 percent, with the largest component consisting of Asian students (29.5 percent). Special education and particularly bilingual programs are extensive and were budgeted at \$21.6 million in FY97, or 26 percent of the total school committee budget.

Academically, student test scores are significantly below state averages and show mixed results over time. Massachusetts Education Assessment Program (MEAP) scores from 1994 to 1996 went down in all tested areas for fourth and eighth graders, while 10th grade scores show some improvement. Test results for the new state wide Iowa tests indicate that only 51 percent of

Lowell third graders are either proficient or advanced readers. The 10th graders scored at the 47th percentile in the achievement test when compared to a representative national sample of students.

On the positive side, the high school drop-out rate in 1996 was only 2.6 percent, considerably lower than the statewide average of 3.4 percent. The plans of the high school graduating class of 1996 indicate that 50.9 percent planned to go on to a four year college, a rate only slightly lower than the statewide rate of 54.1 percent. Lowell students planning to go on to two year colleges added another 26.9 percent or a total of 77.8 percent of seniors planning to go on to either a two or four year college. This compares favorably to the combined statewide average percentage of 72.2 percent.

Scope of the Review

In preparation for the school district reviews, the audit team held meetings with officials from the Department of Education, the State Auditor's Office and other statewide organizations such as the Massachusetts Taxpayers Foundation and the Massachusetts Municipal Association. The review team also read published reports on educational and financial issues to prepare for the school district reviews.

The DOR team met with the private audit firm that conducts financial audits of the City of Lowell. In addition, DOE provided data including the End of Year Reports, foundation budgets, evaluations of test results for Lowell children, as well as statewide comparative data. The DOR's Division of Local Services Municipal Data Bank provided demographic information, community profiles, and overall state aid budget data. While on site in Lowell, the DOR team interviewed officials including, but not limited to, the mayor, city auditor, chief financial officer, school committee chair, school superintendent and selected school principals. Documents reviewed included both vendor and personnel contracts, invoices, payroll data, statistics on students and teachers as well as test results.

In keeping with the goals set out by the Educational Management Accountability Board, the school district review was designed to determine whether or not basic financial goals related to education reform have been met. Data related to performance such as test scores, student to teacher ratios and class sizes were gathered to show results and operational trends. However, this report does not intend to present a definitive opinion regarding the quality of education in Lowell or its successes or failures in meeting particular education reform goals. Rather, it is intended to present a relevant summary of data to the EMAB for evaluation and comparison purposes.

This review was designed to focus on operational issues. It did not encompass all of the tests that are normally part of a year-end financial audit such as: review of internal controls; cash reconciliation of accounts; testing compliance with purchasing and expenditure laws and regulations; and generally accepted accounting practices. Financial transactions were only tested on a limited basis. Also excluded were federal grants, revolving accounts and student activity

accounts. Statistical data relating to enrollment, test scores and other measures of achievements were not tested.

This report is intended for the information and use of the Education Management Accountability Board and the Lowell Public Schools. However, this report is a matter of public record and its distribution is not limited.

III. GENERAL CONDITIONS AND FINDINGS

1. Lowell Overview

Per capita income in Lowell was significantly below the state average in 1989. The state average was \$17,224 while Lowell's average was \$12,701, or 73.7 percent of the state average. There are 11,146 single family parcels in the community, with an average single family FY97 tax bill of \$1,890 and an average assessed value of \$98,472. Lowell reported a total of 9,441 students from low-income households, 59.6 percent of its student population as of October 1996.

For FY97, the city budget was \$206.0 million, excluding capital outlays financed through bonds. Revenue sources consisted of local taxes (29.4 percent), state aid (52.9 percent), and local receipts and other funds (17.7 percent).

Required net school spending for FY97 was \$94.5 million, or 45.9 percent of the city's budget, of which \$70.9 million came from Chapter 70 state education funds. The local contribution requirement to finance the net school spending requirement was \$23.6 million. These figures indicate that the state would contribute 75 percent of the Lowell education budget in FY97.

The Lowell public school system consists of one high school (grades nine through 12) and 28 middle and elementary schools. The total school enrollment was 15,847 as of October 1996.

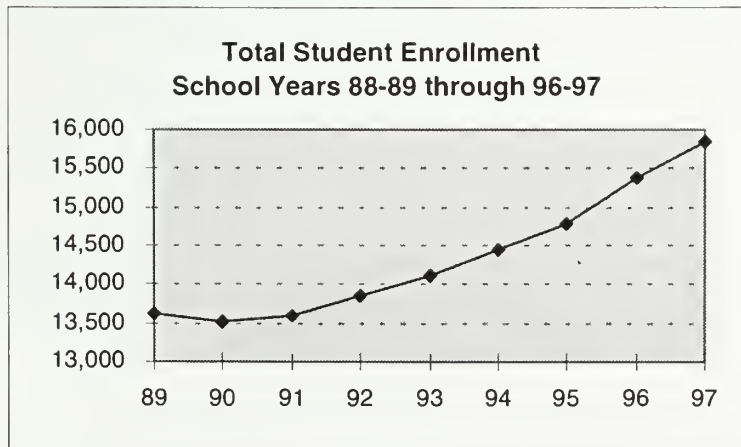
Chart 1

Lowell School District-Demographic Data School Year 1996-97		
	Lowell District	State Average
Enrollment Race/Ethnicity		
White	45.2%	77.9%
Non-White	54.8%	22.1%
First language not English	47.9%	12.7%
Limited English Proficiency	18.0%	4.7%
Special Ed.	14.6%	16.5%
Percent Attending Private School	12.9%	10.8%
High School Drop-Out Rate	2.6%	3.4%
Plans of Graduates Class of '96		
4 Year College	50.9%	54.1%
2 Year College	26.9%	18.1%

Note: Data provided by DOE

As shown in *Chart 2*, school enrollment has increased steadily from 13,518 in October of 1989 to 15,847 as of October 1996, the first quarter of fiscal year 1997. The 15,847 enrollment figure includes pre-Kindergarten and students who go to school out of the district as shown in *Chart 3*.

Chart 2



Note: Enrollment figures are as of October each year, data provided by LPS

Chart 3 shows total enrollment for the pre-kindergarten, elementary, middle and the high school. SPED students who are substantially separated from regular classrooms and out-of-district students are shown separately. These students numbered 171 in 1996.

Chart 3

**Lowell School Enrollment
as of October Each School Year**

	Elementary School		Middle School	High School	Certain SPED, OOD*	Total Enrollment
School Year	Pre-K	K-4	5-8	9-12		
88-89	NA	6,454	4,074	2,694	403	13,625
89-90	NA	6,517	4,002	2,490	509	13,518
90-91	115	6,585	4,195	2,404	284	13,583
91-92	70	6,583	4,408	2,357	426	13,844
92-93	260	6,632	4,673	2,277	272	14,114
93-94	296	6,749	4,821	2,418	155	14,439
94-95	289	6,813	4,997	2,503	176	14,778
95-96	314	7,076	5,089	2,720	192	15,391
96-97	317	7,164	5,179	3,016	171	15,847
89-97 % Change		11.0%	27.1%	12.0%	-57.6%	16.3%
State 89-97 % Change		15.6%	20.4%	0.2%	NA	13.4%

Note: Certain SPED, OOD includes: substantially separate SPED students and out-of-district students. Data provided by LPS

2. School Finances

For the purposes of this audit, school funding is examined primarily from three perspectives: net school spending, the foundation budget, and the school committee budget. DOE issues net school spending requirements consistent with education reform. Foundation budget and target items include only items which also make up net school spending under education reform.

The school committee budget has been examined in some detail because it is the budget in which basic educational decisions are reflected. However, it is only one component of total net school spending. The other component consists of costs charged by the city to the LPS for such items as employee retirement, insurance contributions and other expenditures included in the city budget. There are also expenditures which are included in the school committee budget but are not counted towards the net school spending requirements, such as student transportation, adult education programs and capital outlay.

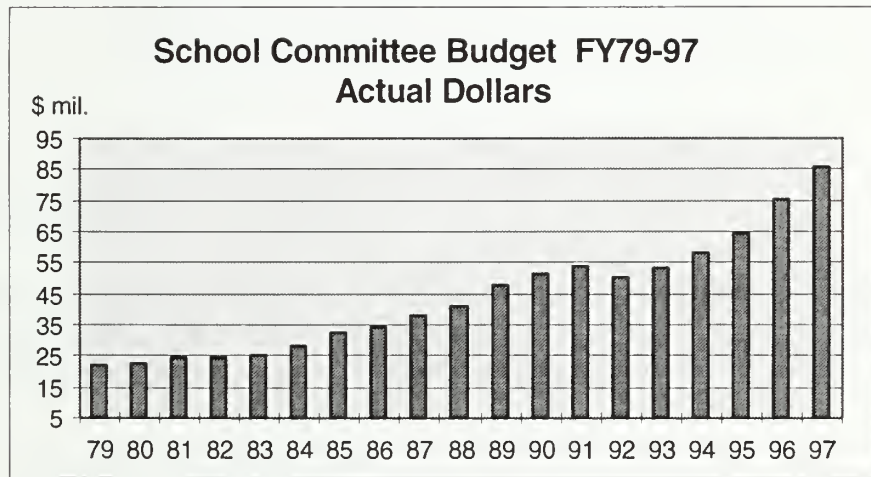
Overall, Lowell has experienced a long period of budget increases both in actual and real dollars. Education is heavily financed with state aid under Education Reform. State aid makes up

75 percent of the FY97 school budget as measured by net school spending definitions. State aid for school construction helped finance a \$171 million school building program by providing 90 percent funding support.

3. School Committee Budget Trend

Chart 4 illustrates the nineteen year trend of the school committee's budget from FY79 to FY97. As indicated by the chart, Lowell has experienced a steady increase in school funding during the 1980s and the 1990s with the exception of FY92 when the budget was cut for one year.

Chart 4



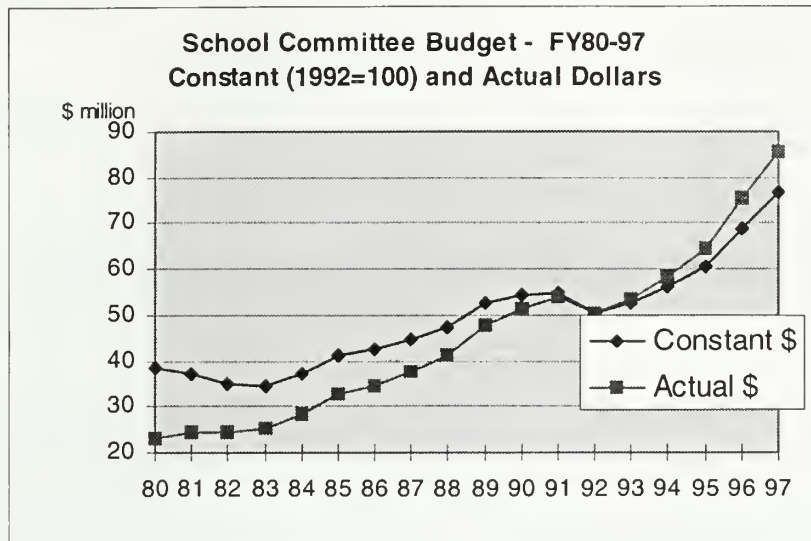
Note: Data obtained from LPS

As a result of the Massachusetts Education Reform Act of 1993, state aid for education increased significantly from \$40 million in FY94 to \$71 million in FY97, an increase of \$31 million or 77 percent. The \$218 million in state aid under Chapter 70 has allowed Lowell to increase funding of almost all programs, hire more teachers and decrease student/teacher ratios.

Chart 5 shows the school committee budget from FY80-FY97 in constant dollars, where 1992 is set at 100. The chart illustrates how the school committee budget fared over time with respect to inflation. Adjusting for inflation, the school committee's budget has seen a long period of significant expansion. From FY89 to FY97 it has increased from \$52.6 million to \$76.7 million, 45.8 percent in constant dollars. Since education reform it has increased by 46.4 percent (FY93 to FY97). The constant dollar budget increase from FY93 to FY97 is \$24.3 million, from \$52.4 million to \$76.7 million.

In constant dollars, the LPS experienced only one year (FY92) of a budget decline.

Chart 5



4. Total School District Expenditures

The school committee budget does not include municipal expenditures for certain school services and school employee benefits. These allowable municipal expenditures are included in the total school expenditure figures reported as net school spending.

Costs charged by the city to the school district amounted to \$12 million in FY96. The costs consisted of employee benefits, \$6.6 million; administration, \$1.1 million; health services, \$0.9 million; maintenance, \$2.2 million; tuition, \$1.0 million; and other expenditures of \$0.2 million. These costs were \$11.4 million in FY93 and have been kept near that level for subsequent years. These expenditure items are added to the school committee budget expenditures to determine net school spending, the key measure for education reform and foundation budget targets. The term net school spending is used as of FY93 and school systems have reported expenditures in accordance with NSS definitions and requirements as of FY94.

Chart 6

Lowell Public Schools
Total Net School Spending
in \$ millions

	FY89	FY93	FY94	FY95	FY96	FY97
School Committee	44.9	48.2	54.6	61.0	71.5	80.0
City	4.9	11.4	11.8	9.7	12.0	12.1
Total	\$49.8	\$59.6	\$66.4	\$70.7	\$83.5	\$92.1

Note: Net school spending was not defined for FY89, equivalent data was calculated for this purpose.
 Data obtained from year end DOE school reports

Using total city and school committee expenditures to arrive at actual and inflation adjusted expenditures per student figures, *Chart 7* provides the FY89 through FY97 trend. It indicates that actual expenditures per student have increased from \$4,223 in FY93 to \$5,812 in FY97, or 37.6 percent. Adjusted for inflation, the figures still show an increase of 24.8 percent for the same period.

Even over the longer period from FY89 to FY97, net funding in constant dollars per student grew from \$4,039 to \$5,198, an increase of 28.7 percent.

Increased funding allowed LPS to increase its programs substantially, provide for more teachers, increase course offerings, invest in technology and reduce student/teacher ratios from 16:1 to 14:1 in the process.

Chart 7

Lowell Public Schools
Net School Spending Per Student
Actual and Constant (1992=100) Dollars

	FY89	FY93	FY97	FY93 - FY97 % Change
Expenditure/Student in Actual \$	\$3,655	\$4,223	\$5,812	37.6 %
Expenditure/Student in 1992 \$	\$4,039	\$4,136	\$5,198	25.7 %

Note: Data obtained from year end DOE school reports

* NSS definition did not exist in FY89

5. Net School Spending Requirements

Under education reform DOE has developed spending requirements for each school district. It uses a formula by which it allocates state aid and sets specific spending targets for each school district.

The types of expenditures which are counted as part of the formula for education reform constitute net school spending. Generally, they include all school district education related expenditures paid for with state aid, under Chapter 70, and municipal school appropriations. Expenditures excluded from the net school spending definition are items such as school transportation, school lunch, school construction, certain capital expenditures and federally financed spending or spending from municipal or school revolving accounts.

Foundation budget targets are set each year for each district based in part on the school enrollment for that year and other criteria. DOE issues the foundation budgets and related financial standards and requirements to each school district.

Each district is required to provide a minimum amount of local funding and meet the net school spending requirement each year. For districts which are not spending at a foundation budget level, the goal is to have that district meet the foundation budget target by the year 2000, utilizing both increased state and local funding.

As indicated in *Chart 8*, Lowell was significantly below foundation in FY94 when its net school spending target was set at 75.6 percent of the foundation budget. By FY 95 it reached 81.8 percent, spending \$66.4 million. As *chart 8* indicates, significant funding increases each year have allowed Lowell to move that figure to 88.6 percent in FY97, but short of its target of 91 percent. **Its year-end report submitted to DOE in October indicates that the FY97 NSS target of \$94.5 million has not been met.** Under DOE reporting rules the final shortfall number will be reduced to \$1.7 million as credit is given for the municipal budget not actual municipal expenditures. The report had not been reviewed by DOE and final numbers were not available at the time this report was prepared.

Lowell will not incur any penalties as long as the shortfall to net school spending is less than 5 percent (MGL, Ch. 70, section 11). However, in FY98 Lowell is required to spend the amount of the FY97 shortfall in addition to its required net school spending amount.

Chart 8

Lowell Public Schools
Foundation Budget and Net School Spending (NSS)
\$ in millions

	FY94	FY95	FY96	FY97
Foundation Budget Target	81.3	86.4	98.4	103.9
Required NSS as % of Foundation	75.6 %	81.8 %	83.5 %	91.0 %
Required NSS	61.5	70.7	82.2	94.5
Actual NSS	66.4	70.7	83.5	92.1
Variance \$	4.9	0.0	1.3	-2.4
Variance %	8.0 %	0.0 %	1.6 %	-2.5 %
Actual NSS as % of Foundation	81.7 %	81.8 %	84.9 %	88.6 %

Data obtained from DOE

Actual NSS is reported according to "foundation budget categories" on DOE's End of Year report. DOE uses certain budgeted municipal expenditures to determine if a school district is in compliance with NSS requirements. This amount may be different from actual NSS. In Lowell's case, the \$2.4 million actual variance shown in Chart 8 would be treated as a \$1.7 million variance based on municipal budgeted expenditures.

As *Chart 9* indicates, Lowell has been able to increase its school budget solely due to state aid which has increased from \$40 million in FY94 to \$70.9 million in FY97, an increase of \$30.9 million or 77 percent. During this same period the local contribution to the net school spending budget has decreased from \$26.4 million to \$21.2 million in FY97. The local share percentage has decreased every year since FY 94. As a result state aid, which provided up 60.2 percent of the school budget in FY94, now makes up 77 percent of actual net school spending.

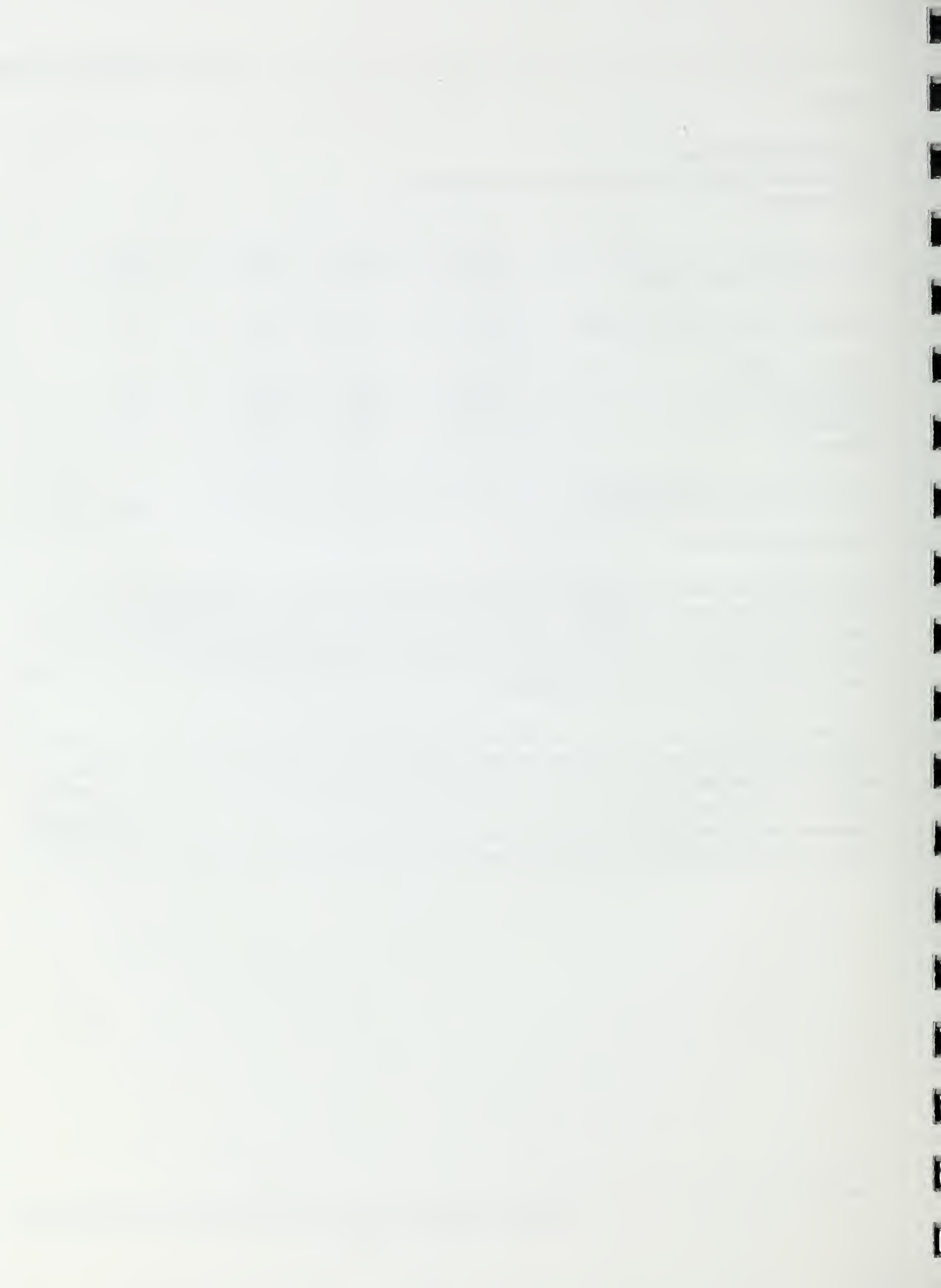


Chart 9

Lowell Public Schools
Foundation Budget and Net School Spending (NSS)
\$ in millions

	FY94	FY95	FY96	FY97
Required Local Contribution \$	21.6	23.5	22.8	23.6
Actual Local Contribution \$	26.4	23.4	24.1	21.2
Variance \$	4.8	-0.1	1.3	-2.4
Variance %	22.2 %	-0.4 %	5.7 %	-10.2 %
Net School Spending \$	66.4	70.7	83.5	92.1
Local Share \$	26.4	23.4	24.1	21.2
State Aid \$	40.0	*47.3	59.4	70.9
Local Share %	39.8 %	33.1 %	28.9 %	23.0 %
State Aid %	60.2 %	66.9 %	71.1 %	77.0 %

* FY95 State Aid amount above does not include Equity Aid of \$878,433.

Note: Data obtained from DOE

6. School Committee Program Budget

As shown in *Chart 10*, from FY93 to FY97 the school committee budget has increased by \$31.4 million from \$50.1 million to \$81.4 million, an increase of 62.7 percent. These numbers exclude municipal expenditures as well as student transportation, adult education and capital outlay expenditures, items also excluded from net school spending figures. The school budget is presented in greater detail in Appendix A .

Core subjects, which include English, mathematics, science and social studies, received the largest budget increase, 81.5 percent, while audio-visual, music and art programs increased by 72 percent. LPS follows a policy of mainstreaming special education students and, partly as a result of that policy, was able to contain these expenditures to a 50.1 percent increase, significantly less than the 62.7 percent overall school committee budget increase over the same period.

Administrative expenditures for the superintendent's and the principals' offices increased by 50 percent, and were also kept below the overall budget increase. The kindergarten program expanded from half-day to full-day with a budget increase of 157.5 percent.

"Other expenditures," amounting to \$25.9 million in FY97, include such items as operations and maintenance (\$6.9 million), insurance programs (\$4.9 million), library services (\$1.1 million) among others.

Appendix A provides an overview of programs funded in the school committee budget for FY89, FY93 and FY97. It tracks budget changes as well as the percentage of the total increase between FY93-FY97 (\$31.4 million) for each program and budget category.

Chart 10

**Lowell Public Schools
School Committee Budget
Selected Programs Only
in \$ thousands**

	FY89	FY93	FY97	FY93-97 Inc/(Decr)	FY93-97 % Incr	Inc/(Decr) as % of \$31.0 mil. Total Incr.
SPED & Bilingual Programs	11,452	14,405	21,619	7,214	50.1%	23.0%
Core Subjects	5,344	4,822	8,752	3,931	81.5%	12.5%
AV/Music/Art	1,738	2,106	3,623	1,517	72.0%	4.8%
Kindergarten	723	1,020	2,625	1,606	157.5%	5.1%
Elementary Schools	7,650	7,815	11,114	3,300	42.2%	10.5%
Phys. Ed. & Athletics	1,487	1,526	2,544	1,018	66.7%	3.2%
Superintendent & Principals	3,664	3,520	5,279	1,760	50.0%	5.6%
Other Costs	12,829	14,836	25,857	11,021	74.3%	35.1%
Total Budget *	\$44,888	\$50,050	\$81,414	\$31,365	62.7%	100.0%

* Note: Total reflects total budget numbers excluding transportation, adult ed. and capital outlay
Other totals may not add due to rounding
Data provided by LPS

7. Foundation Budget

The foundation budget is a target level of spending designed to insure that at least a minimum level of educational resources are available per student in each school district. The foundation budget is determined by a number of factors including enrollment, staffing and salary levels, to arrive at budget targets for the foundation budget items as shown in Appendix B1. The key budget items are: payroll, non-salary expenses, professional development, expanded programs, extraordinary

maintenance, and books and equipment. Each of these budget items is calculated using the previous year's end-of-year pupil enrollment with adjustments made for special education, bilingual and low income students. Certain salary levels and full-time-equivalent (FTE) standards are used to calculate salary budgets. Annual adjustments are made to account for inflation.

The foundation budget establishes spending targets by grade (pre-school, kindergarten, elementary, junior high and high school) and program (special education, bilingual, vocational and expanded or after school activities). Grade and program spending targets are intended to serve as guidelines only and are not binding on local school districts. However, in order to encourage appropriate levels of spending, M.G.L. Chapter 70, section 9 requires a school district to report to the Commissioner of Education when it has failed to spend the amounts incorporated in the foundation budget for four categories: professional development, textbooks, extended programs (generally considered expanded program for low income students), and extraordinary maintenance.

LPS' spending in these areas for FY95 and FY96 are shown in *Chart 10a*. Expenditures did not reach foundation budgets in any of the expenditure categories and LPS did not file any report for any year with the Commissioner's office as required by Chapter 70 Section 9. Lowell school officials indicated to the auditors that they were unaware of the reporting requirement, and that DOE had sent no instructions or guidelines on this matter.

Chart 10a

Net School Spending Foundation Budget in whole dollars	FY 95			FY 96		
	ACTUAL	NSS	FND BUDGET NSS/FND %	ACTUAL	NSS	FND BUDGET NSS/FND %
Professional Development	368,662	1,412,097	26%	857,283	1,616,619	53%
Books and Equipment	1,624,280	3,940,496	41%	3,131,771	4,385,066	71%
Extraordinary Maintenance	143,605	2,708,770	5%	0	3,085,708	0%
Expanded Program	0	2,277,474	0%	0	2,843,450	0%

Appendix B shows the foundation budgets for LPS for FY94, FY95 and FY96. Expenditures and variances from the foundation budgets are shown for each year, as well as how expenditures compare as a percentage of the foundation budget for each year. The data indicate that salaries of assistants, clerical and custodial staff, employee benefits, and SPED all met or exceeded foundation targets. Special Education exceeded foundation targets by far more than any other category.

However, numerous items did not meet the targeted foundation levels. Some of these areas include staff support, central office, expanded programs, extra-curricular, books and equipment, and extraordinary maintenance. Though professional development is still below foundation targets, LPS has made a significant effort to increase funding in this area.

This pattern of expenditures to foundation budget targets is similar to statewide spending practices found in other school districts as articulated in the Foundation Budget Review Commission report of February, 1996.

8. Staffing - Full Time Equivalent (FTE) Trends

In FY89 LPS had 1,381 FTE's and 856 teachers. By FY93 these numbers had dropped to 1,264 and 839 respectively as budget pressures forced reductions in staff. With the assistance of education reform related funding, staffing has been increased each year and by FY97 total FTE reached 1,726 with 1,102 teaching FTE's. In this context teachers do not include other instructional staff such as supervisors or teaching administrators.

Chart 11 shows the trend in total FTE and teachers while *Chart 11a* illustrates the resulting trend in the overall student/teacher ratio from FY89 to FY97 with and without SPED and bilingual teachers.

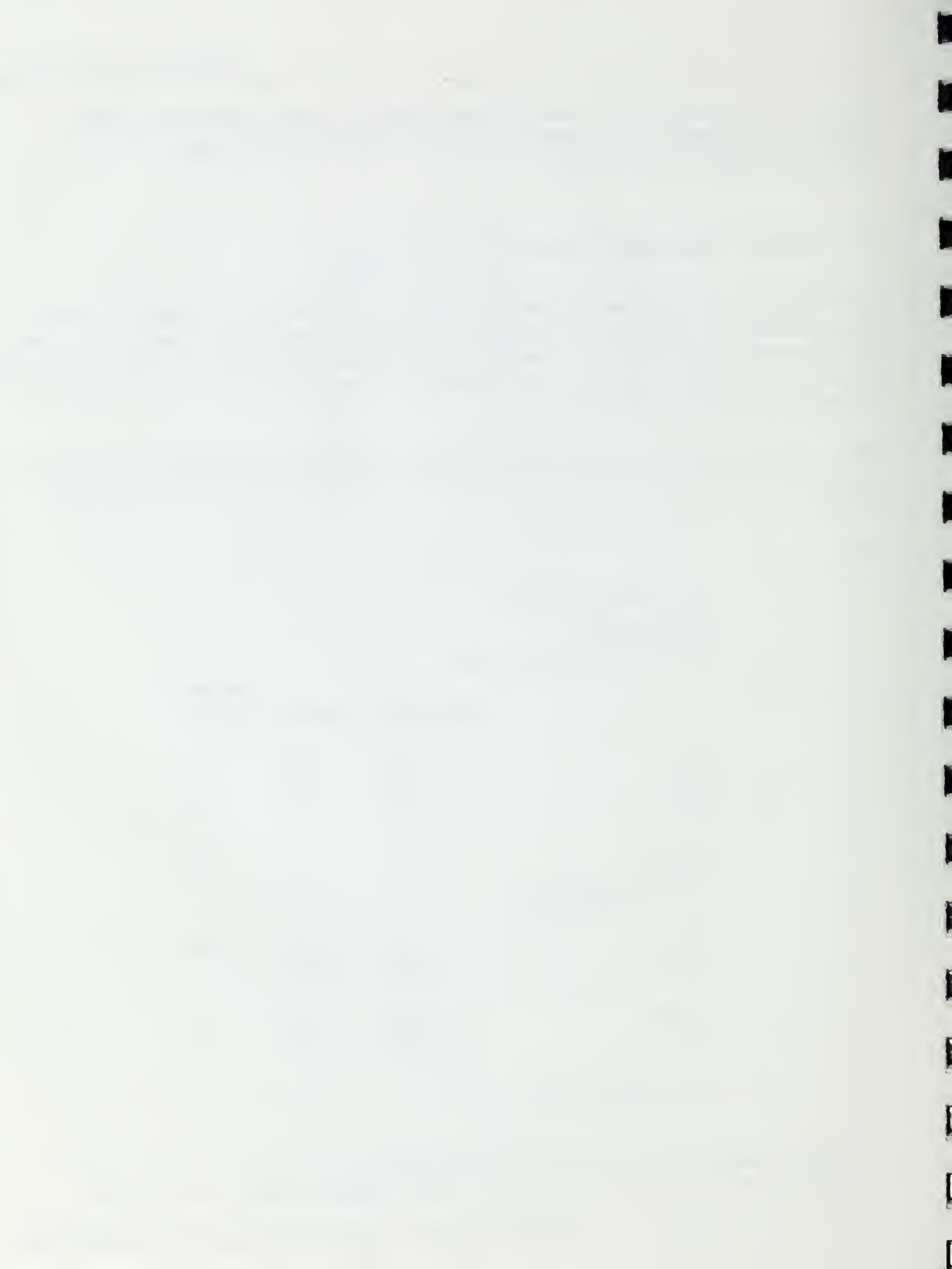
Chart 11

Lowell Public Schools Staffing Trend Full Time Equivalent (FTE)

	Total FTE	Teachers	Teachers % of FTE
FY89	1,381	856	62%
FY93	1,264	839	66%
FY97	1,726	1,102	64%
FY89-93	-117	-17	14%
Increase/(Decrease)	-8.5%	-2.0%	
FY93-97	462	263	57%
Increase	36.6%	31.3%	
FY89-97	345	246	71%
Increase	25.0%	28.7%	

Data provided by LPS

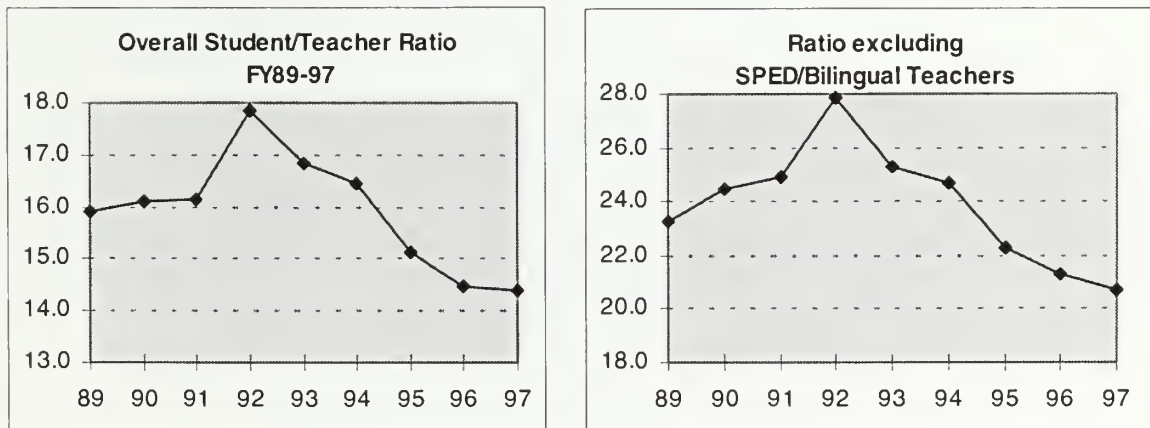
As *Chart 11* indicates, LPS went through a period of staff reductions between FY89 and FY93 when FTE's were reduced by 117, or 8.5 percent. Only 17 teaching FTE's were lost, as most



reductions were made in the non-teaching areas. Non-teaching positions were restaffed in the FY93-97 period as the total FTE count rose by 462. However, 263 of these FTE's (57 percent), were teachers.

Over the whole FY89-97 period, LPS was able to increase staff by 25 percent with the number of teachers rising by 28.7 percent. Enrollment over this same period only increased by 16.3 percent, allowing LPS to make substantial progress in its effort to reduce student/teacher ratios. Its success in doing so is illustrated in *Chart 11a* which shows the FY89-97 trend in the total student to teacher ratio. That ratio was 16:1 in FY89, increased to almost 18:1 in FY92, but since then has decreased continuously to less than 15:1 in FY97. When adjusted for the number of SPED and bilingual teachers, using the same total student population for illustration purposes, the resulting ratios would change considerably, as shown in the diagram on the right in *Chart 11a*.. The 270 SPED and bilingual teachers in FY89 increased to 280 in FY93, and reached 338 in FY97, or 30.8 percent of total teachers.

Chart 11a



A review of FTE changes by type of school or program is shown in *Chart 11b* below. It indicates that the largest increase in teachers occurred in the middle schools and the high school where 157 teachers were added. SPED and bilingual programs received an additional 58 teachers, while pre-school, kindergarten and elementary schools experienced an increase of 48 teachers.

Chart 11b

**Teachers by Program
Full Time Equivalents
(excluding teaching aides)**

	FY89	FY93	FY97	Increase 93-97	% Increase
Pre School	0	7	12	5	71.4%
Kindergarten	23	24	48	24	100.0%
Elem. Classroom Teachers	256	235	254	19	8.1%
Middle, High School and other teachers	307	293	450	157	53.6%
subtotal	586	559	764	205	36.7%
SPED total	140	148	176	28	18.9%
Bilingual	130	132	162	30	22.7%
subtotal	270	280	338	58	20.7%
Total	856	839	1,102	263	31.3%

Note: Data provided by LPS

Most notable is Lowell's effort to increase its teaching staff in the core subject areas such as English, mathematics, science and social studies as shown in *Chart 11c*. Science teachers were more than doubled, from 31.5 to 64, as LPS implemented a policy that all schools including elementary schools should have at least one science teacher. A similar approach was applied to computer teachers who went from only 4 in FY93 to 29 in FY97. Mathematics teachers increased by 74.2 percent, from 31 to 54, while social studies teachers increased by 35.5 percent, from 31 to 42.

Chart 11c

**Teachers by Core Subjects
Full Time Equivalents**

	FY89	FY93	FY 97	Increase 93-97	% Increase
English	44.0	39.0	49.0	10.0	25.6%
Mathematics	34.0	31.0	54.0	23.0	74.2%
Science	37.0	31.5	64.0	32.5	103.2%
Social Studies	33.0	31.0	42.0	11.0	35.5%
Total	148.0	132.5	209.0	76.5	57.7%
Computer Teachers	0.0	4.0	29.0	25.0	625.0%

Note: Data provided by LPS

The elementary student/teacher ratio has remained fairly constant at around 23 to 24 students per teacher, except for FY93 when it climbed to 25.9 to 1. A significant improvement is evident in the middle and high school ratio, as it decreased from about 22.1 to 1 to 18.2 to 1 in FY97. LPS' emphasis on increasing teaching staff in the core subject is also evident, as the ratio of middle and high school students to core teachers was reduced from 52.5: 1 in FY93 to 39.2:1 in FY97, a 25.3 percent improvement.

Chart 12

Lowell Public Schools Student Teacher Ratios	FY89	FY93	FY97	FY93-97 % Change
All students/All teachers	15.9:1	16.8:1	14.4:1	-14.3 %
Elementary K-4	23.1:1	25.9:1	23.8:1	-8.1 %
Middle and High School	22.1:1	23.7:1	18.2:1	-23.2 %
Certain Core Subjects	45.7:1	52.5:1	39.2:1	-25.3 %
Note: Certain core subjects include English, mathematics, science and social studies.				

9. Payroll - Salary Levels, Union Contracts

A review of salary expenditures shown in *Chart 13* indicates that between FY93 and FY96 total expenditures for salaries increased by 47.3 percent, 7.2 percent more than the school budget increase of 40.1 percent. Total salaries made up 68.8 percent of the budget in FY93 and 72.3 percent in FY96. Teaching salaries as a whole increased by 53.7 percent over this period and increased as a percentage of the total budget from 45.6 percent to 50.1 percent. These salary figures do not include fringe benefit expenditures. As explained by the Superintendent, the LPS decided to use additional funds available under education reform to raise teachers' salaries in Lowell, over a several year period, to become more competitive with other school districts in order to attract teachers and avoid losing teachers to other systems.

Of the total increase in school expenditures of \$23.9 million from FY93 to FY96, \$14.6 million or 61.1 percent is attributed to teachers' salaries while \$4.8 million is due to non-teaching salary increases for administrators, paraprofessionals, clerical staff, custodial staff, etc.

Chart 14 shows that the average teacher's salary increased from \$32,354 to \$39,643 between FY93 and FY96, an increase of 22.5 percent. However, it is noted that the FY96 average teacher's salary of \$39,643 is still below the statewide average salary of \$41,408 as reported by DOE for FY96 from year-end reports submitted by school districts. Lowell's FY97 average teacher's salary increased by another 7.8 percent over FY96, to \$42,738. No statewide numbers are available yet for FY97.

Chart 13

**Lowell Public Schools
Total Salary Expenditures
\$ in Millions**

	FY93	FY96	Increase	%
Total School Expenditures	\$59.6	\$83.5	\$23.9	40.1%
Total Salaries	\$41.0	\$60.4	\$19.4	47.3%
As % of Expenditures	68.8%	72.3%	3.5%	
Teaching Salaries	\$27.2	\$41.8	\$14.6	53.7%
As % of Expenditures	45.6%	50.1%	4.5%	
Non-Teaching Salaries	\$13.8	\$18.6	\$4.8	34.8%
As % of Expenditures	23.2%	22.3%	-0.9%	

The review team analyzed all employee contracts from FY89 through FY97 comparing teaching salaries, number of step increases, and new staff.

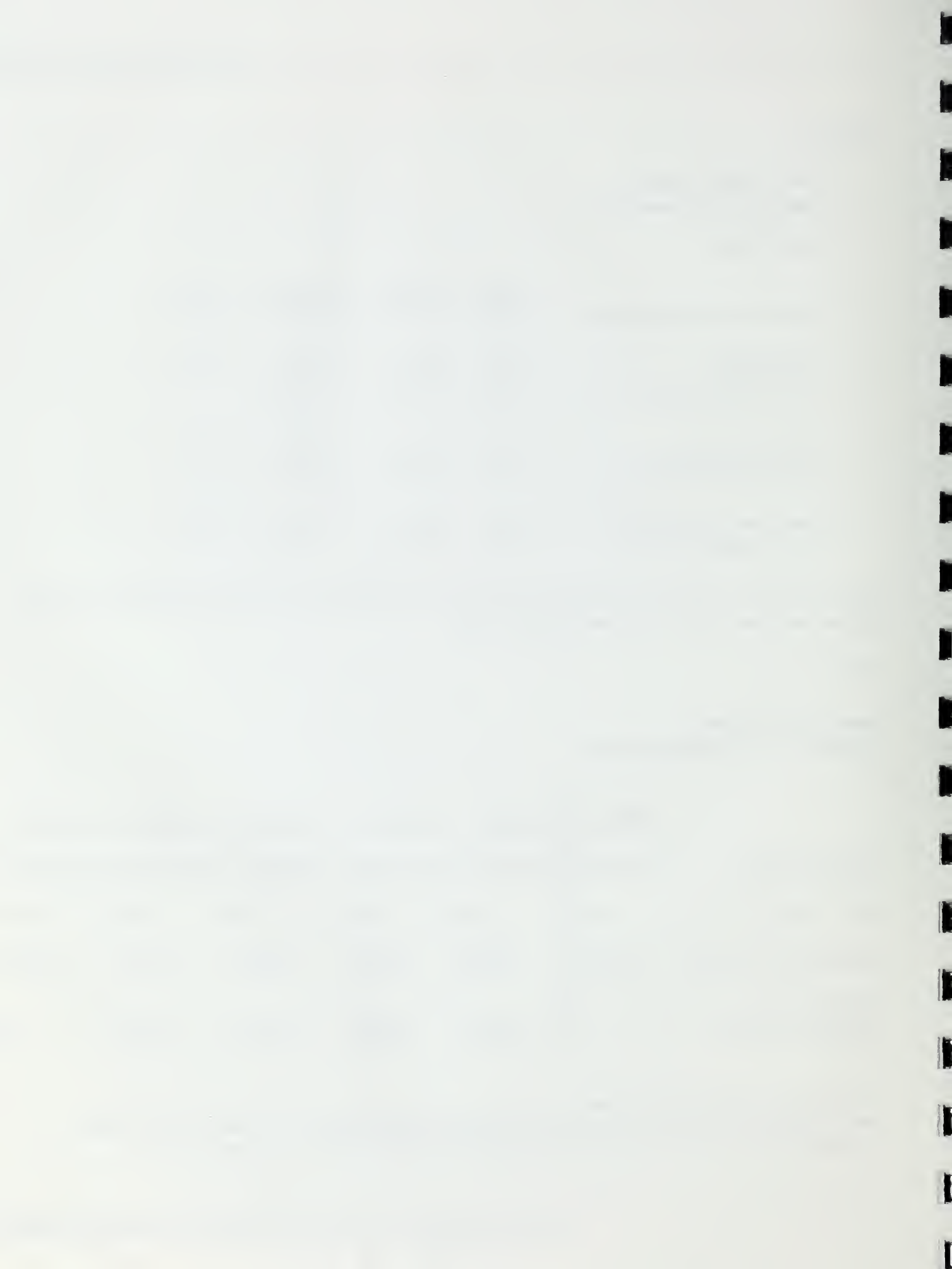
Chart 14

**Lowell Public Schools
Expenditures for Teaching Salaries**

	FY89	FY93	FY94	FY95	FY96	FY97
Teaching Salaries	\$26,153,659	\$27,209,577	\$32,727,466	\$37,619,052	\$41,823,748	\$46,712,337
FTE - Teachers	866	841	880	969	1,055	1,093
Average Salary per FTE	\$30,201	\$32,354	\$37,190	\$38,823	\$39,643	\$42,738
DOE Reported Statewide Average		\$38,681	\$39,012	\$40,718	\$41,408	NA

* FTE excludes adult education teachers.

Note: Average salaries per FTE consist of all salaries, step increases, longevity and differentials (i.e., assistant principals, advisors, coaches etc.). Data obtained from LPS and DOE's End of Year Reports.



Lowell teachers did not have a contract for FY91 or FY92 but continued to work under the conditions of the FY89 - FY90 contract. A new contract covering FY93 through FY94 was signed on August 11, 1993. Teachers agreed to salary increases of 3 percent as of February 1, 1993, 3 percent as of September 1, 1993, 3 percent as of February 1, 1994 and 1.5 percent as of June 30, 1994. The contract negotiated for FY95 through FY97 was signed on May 10, 1995. In accordance with this contract, teacher salary raises were 2 percent for FY95, 6 percent for FY96 and 7 percent for FY97 plus step raises as applicable.

Overall, the cumulative salary increase for teachers from FY93 to FY97 was 28.3 percent excluding step raises. This represents the minimum increase a full time teacher would obtain apart from any raises due to step changes or completion of an advanced degree. In contrast, the state and government implicit price deflator for the FY93-FY97 period indicates a 9.5 percent inflationary increase.

Nearly two-thirds of Lowell teachers are currently at the highest step of their "lane" (degree level). That proportion has not changed substantially over the past few years. As a result most teachers' salaries reflect a 28.3 percent growth. However, the remaining one-third of the teachers could have seen an increase of up to 75 percent or more, given various step increases and/or lane changes.

Illustrated in *Chart 14a* are three scenarios outlining various teacher salary increases from FY93 to FY97. Teacher A has a BA and was at step 7 in FY93. Four years later, Teacher A is still at step 7 but due to union contract salary increase, he now earns \$41,916, an increase of 28.3 percent. Had that teacher earned an MA degree during that time, the salary would have risen to \$43,963, a total increase of 34.6 percent. Using Teacher B as an example, it can be shown that by simply advancing through the normal process of step increases during this four year period, a teacher increased his/her salary from \$25,104 to \$41,916 or 67 percent. If the same teacher obtained a MA degree during this period, the salary would go to \$43,963 in FY97, an increase of 75.1 percent over FY93. In the last example, Teacher C started out with a BA at the lowest step and lowest salary level in FY93, at \$22,000. Due to the relatively higher increases in the first series of steps, the same teacher in FY97 earns \$35,738 without obtaining an additional degree or \$37,785 if he earned a MA degree on the way.

Chart 14a

	FY93			FY97 Base Pay			% Change	
	Degree	Step	Base Pay	Step	BA	MA	BA	MA
Teacher A	BA	7	32,667	7	41,916	43,963	28.3%	34.6%
Teacher B	BA	3	25,104	7	41,916	43,963	67.0%	75.1%
Teacher C	BA	1	22,000	5	35,738	37,785	62.4%	71.8%

In addition to teacher salaries and the teachers' contracts, the team reviewed the contract provisions and salary structure of all other school department personnel. This included the Unit B employees of the Administrators' Association, paraprofessionals, clerical staff and maintenance staff. All of the above employees received the same percentage increases in salary as had been negotiated with the teachers.

Managerial personnel contracts such as the Superintendent, Assistant and Deputy Superintendents, Project Director, and school building principals were examined separately pursuant to the new provisions under the Education Reform Act of 1993. **School building principals did not negotiate individual contracts and salaries, but signed identical contracts with salary based upon the degree attained, type of school and enrollment.** Individual three year contracts were negotiated for the superintendent and his direct administrative assistants with terms of agreement, compensation and performance responsibilities outlined for each individual.

An analysis of salaries for school building principals from FY95 through FY97 reveals the same percentage increase as the teachers and other school personnel, specifically 2 percent for FY95, six percent for FY96, and seven percent for FY97. The superintendent, the deputy superintendent and assistant superintendents also received the same percentage salary increase during the period.

Chart 15

Comparison of FY93 through FY97 Teacher Salary Schedules Steps 1 and 7 only

	STEP 1 - Lowest Salary					STEP 7 - Highest Salary				
	FY93	FY94	FY95	FY96	FY97	FY93	FY94	FY95	FY96	FY97
BA	22,000 22,660	23,340 24,040	24,889	26,382	28,229	32,667 33,647	34,656 35,696	36,957	39,174	41,916
MA	23,529 24,235	24,962 25,711	26,618	28,215	30,190	34,262 35,290	36,349 37,439	38,761	41,087	43,963
MA+30	24,724 25,466	26,230 27,017	27,970	29,649	31,724	35,457 36,521	37,616 38,745	40,113	42,519	45,496
Other Doc.	25,442 26,205	26,991 27,801	28,782	30,509	32,645	36,175 37,260	38,378 39,529	40,924	43,380	46,416
Ph.D	25,919 26,697	27,497 28,322	29,322	31,081	33,257	36,652 37,752	38,884 40,051	41,464	43,952	47,028

Note: BA - Bachelor of Arts degree, MA - Master degree, MA+30 - Master degree plus 30 additional credits, Other Doc. - other doctoral degree, Ph.D. - Doctor of Philosophy degree

In fiscal years 1993 and 1994, the union contract provided for two salary raises; the second raise effective later in the school year is reflected in the salaries shown on the second line under those two fiscal years.

Data provided by LPS

10. Professional Development Program

School systems are required to prepare a professional development plan and meet minimum spending requirements for professional development. A comprehensive professional development plan is in place at LPS detailing objectives, activities, resource requirements, timelines, implementation assignments, and budget requirements. A planning calendar is available with the specifics on course and workshop offerings.

During FY95 and FY96, DOE required school districts to spend at a rate equivalent to \$25 per pupil for staff professional development. This requirement was increased to \$50 per pupil for

FY97. Although LPS met the total minimum spending requirement each year, spending levels did not meet foundation targets as shown in the last column of *Chart 15a*.

Chart 15a

**Lowell Public Schools
Expenditures for Professional Development
in whole dollars**

	Staff Development	Professional Reimbursement *	Total Spent	Minimum Spending Requirement	Total Spent as % of Foundation
FY94	318,258	107,600	\$425,858	N/A	32%
FY95	368,662	120,017	\$488,679	\$369,450	35%
FY96	566,147	291,136	\$857,283	\$384,775	53%
FY97	726,529	256,262	\$982,791	\$792,350	57%

* LPS reported professional reimbursement for tuition as part of teachers' salaries on the end of year report for FY94 and FY95.

The Lowell public school system has contracted with UMASS-Lowell to provide educational and training services to administrators, teachers, substitutes, and paraprofessionals. Tufts University provides similar services to the Early Childhood staff, and Middlesex Community College provides training to paraprofessionals and teachers.

Most professional development funds have been distributed to the schools for program development at the school level. A percentage (30 percent) of each allocation is devoted to activities related to Chapter 636 (desegregation order). Professional development needs assessments and determinations are incorporated into the United School Improvement Plans (USIPs) and are monitored by Title 1 staff and Chapter 636 facilitators throughout the year.

The professional development needs of the staff are addressed through multiple options including workshops and courses that award professional development points (PDPs) toward teacher certification requirements. Professional staff members must earn a minimum of 120 PDPs by 1999 in order to retain certification by the Department of Education. Some of the opportunities offered are:

- Tuition reimbursement of up to \$400 per course, two courses per year
- Appropriate courses scheduled in conjunction with UMASS-Lowell for certification candidates and support for practicum at the district level
- Participation in outside workshops approved by the principal with reimbursement available

- Workshops developed at the school level for school improvement purposes
- Systemwide workshops developed and sponsored by the central office administrators
- Leadership Academy for principals, assistant principals, and central office administrators
- Summer Institute opportunities through the following programs or departments: Chapter 636; Title I; bilingual; special education; early childhood; and professional development
- Teacher Leadership series for science teachers and guidance counselors in collaboration with UMASS-Lowell
- Staff in-service training in newly acquired reading series
- Stipends and substitute support for district initiatives

Chart 16 provides a partial list of twenty-five selected courses for 1996 - 1997 school year. It is noted that three out of the first four courses listed on the chart deal directly with subjects related to education reform.

Chart 16

Professional Development Course Offerings 1996 - 1997

TITLE	P.D.P	Participants
1 Curriculum Frameworks Committee (various subjects)	4 to 30	376
2 Woodcock Johnson Revised	6 to 12	120
3 Project Peace - Staff Training	4	120
4 Thematic Units with Internet Connections	12	113
5 SPED Staff Workshop	6	113
6 Summer Inclusion Training	4	101
7 Mentor Training and Peer Coaching	18 to 43	99
8 Guided Visitations - SPED	1.5 to 6	88
9 "Semple" Approach to Math	6	87
10 School Based Sum Inclusion	4	82
11 "I Search" Training	12	63
12 Cultural Awareness	4	59
13 Promising Practices for 2nd Language Learners	4	56
14 Green Chimneys	16	55
15 Project READ - Decoding	12	55
16 New Staff Training	6	48
17 Implementing Developmental Education	18	46
18 Conflict of Interest & Student Regs	2	44
19 Reading Across the Curriculum	4	38
20 Physical Education	10	36
21 ADA & Public Schools	3	35
22 Practices to Support Diverse Learning	10	30
23 Music	10	29
24 Differentiating Instruction in Mixed Ability Classes	4	29
25 Understanding the SPED Process	1.5	27

11. School Improvement Plans

M.G.L. Chapter 71, Section 59C mandates each school to have a school council, which is required to develop a school improvement plan annually.

The Lowell Public School system has generally met the requirements of the law and has implemented a planning process with specific goals and objectives, time frames and on-site monitoring of progress. The audit team noted the requirement that each plan include an addendum addressing improvement of the California Achievement Test 5 (CAT5) test scores for elementary and middle schools.

Instructions for the plans are clear and appear to have resulted in a high degree of conformance. The plans are based on a standard document distributed by the superintendent's office and every plan must comply with this format. The format delineates the past year's goals and whether they were accomplished, and specifies what must be done to accomplish the current year's goals. Although not required by the Education Reform Act, instructions require the plans to address the transition of students. Transition of children into kindergarten, from elementary school to middle schools, bilingual students to the general curriculum and various other transitions are included. The School Committee reviews and approves all plans .

During the school year the Project Director, Chapter 636 facilitators, and Title I facilitators visit each school and monitors its progress toward compliance with its school improvement plan.

There were some minor issues of noncompliance. For example, there was no School Improvement Plan for the Alternative School, which is a small school with an enrollment of 24 students. Four plans either did not address extra-curricular activities or stated that these activities were not offered. The Reilly School's plan did not address extra-curricular activities. The Cardinal O'Connell School's plan stated, "all activities are done in the school day". The Bailey School's plan stated, "We do not at the time offer any such programs". The Varum School's plan stated, "At this time our focus has been on many areas other than extra-curricular activities. However, in the future we hope to address this issue."

12. Time And Learning

Time and learning standards refer to the amount of time students are expected to spend in school, measured by the number of minutes or hours in a school day and the number of days in the school year. DOE requirements, effective September 1997, call for 990 instruction hours per year for both the high school and middle school and 900 hours of instruction for the elementary schools. The school year remains at 180 days per year.

The time and learning plan originally submitted by LPS in September 1996 was not in compliance with Student Learning Time Regulation 27.07 because it interpreted such activities as morning exercises, time passing between classes and lavatory, and preparing for dismissal as instructional

time. The amended plan clearly indicated that, in order to fully comply with the regulations for the 1997-1998 school year, changes needed to be made in the length of the school day.

While LPS officials became aware of Time and Learning requirements for the 1997-98 school year at the time the 1994-1997 contract was negotiated, a management decision was made to implement the standards in phases. LPS decided to make some initial adjustments by eliminating nine early release days, the eighth grade graduation day and study-hall in the high school. The district also standardized the time allowed in schools for students to go from class to class. Any additional time required to meet the new standards would then be negotiated as part of the contract to be effective in September of 1997.

At the beginning of the 1997-1998 school year, LPS was not able to meet the Time and Learning requirements as the teachers' contract was still in negotiation and LPS found it necessary to request a temporary waiver from DOE. Representatives of the teachers and school administration were at an impasse regarding the amount of additional compensation for the additional instructional time scheduled by LPS to meet the new time and learning standards.

Chart 17 outlines the time and learning standards in place at the time of audit. DOE requirements are shown for the 1997/98 school year. LPS' scheduled hours of 990 for the middle and high schools and 900 for the elementary schools were scheduled beyond the requirements to provide some latitude in case of unforeseen circumstances.

Chart 17

	1996/1997		1997/1998		
	Hours/Year	Minutes/Day	Hours/Year DOE Standard	LPS*	Minutes Per Day
High School	915	305	990	990	330
Middle School	915	305	990	990	330
Elementary School	825	275	900	900	300
Kindergarten	825	275	N.A.	900	300

Note: data obtained from LPS

* Proposed schedule to meet DOE's Time and Learning Regulations.

13. Courses and Class Sizes

The results of the review of high school classes for 1997-98 undertaken to assess class sizes are shown in *Chart 18*. The school's average enrollment in sections was less than, or equal to, the goal of 25 students per class with the exception of English (26.7) and social studies (25.1). The bilingual program had the smallest average class size with 12 students, while English had the largest with 26.7 students. Except for mathematics, 16 percent or more of all core subject sections had at least 30 students.

Chart 18

Lowell Public Schools - Summary Data
High School Classes
Core Subjects and Bilingual Education

	Number of Sections	Total Enrollment	Avg. Enroll. Per Section	<u>Sections with</u>		
				25 or more	30 or more	30+ %
English	122	3,258	26.7	97	27	22%
Mathematics	160	3,722	23.3	79	13	8%
Science	110	2,720	24.7	67	20	18%
Social Studies	111	2,784	25.1	78	18	16%
Bilingual	78	954	12.2	1	0	0%

Note: Data obtained from LPS records

14. Technology and Computers

The implementation of computer technology is a primary objective in Lowell. The Technology Plan, approved by the Department of Education, calls for spending \$21.8 million over the next five years starting in FY98 for personnel, hardware and related costs. Fifteen million dollars will come from operating funds to support the salaries of computer teachers for each school. The Technology Plan, however, does not specifically address the implementation of computer technology incorporated in the \$40 million renovation of Lowell High School. Five of the schools in Lowell have home pages on the Internet.

Each school is expected to have a computer laboratory with four computer work stations in each classroom - one for the teacher and three for the students. In fourteen of the middle and elementary schools (seven new elementary, three new middle and four renovated middle schools) the labs and the classrooms will be connected to a Local Area Network (LAN), which in turn will be connected to a Wide Area Network (WAN). This has been done. Two connections will run through Bell Atlantic lines to the central office which will be connected to the Internet. This system gives Internet access to all terminals in the school system. The ten older elementary schools need electrical wiring for the new system, and this work is scheduled for FY98. When work is completed, these schools will also be connected to the central office and to the Internet.

Each school has at least one computer teacher who performs two tasks. The first is to conduct classes for students in the computer laboratory. The second is to work with the other teachers to assist them in integrating technology into their curriculum.

The elementary and middle school academic program (grades K to 8) uses Apple Macintosh computer equipment and will continue to do so for the foreseeable future. "The plan for Lowell High School is primarily a Windows '95 environment." The Technology Plan, dated May 15, 1997, states that an additional 240 computers have been purchased for the high school. These computers are laptops to be used by teachers for lesson planning and presentations as well as for administrative purposes. At the closing conference, LPS advised the auditors that another 206 computers were purchased in October of 1997 and an additional 250 computers were ordered in December, 1997 for the high school students.

15. Supplies and Textbooks

Since the inception of education reform, LPS has increased its spending on supplies and textbooks in all programs. This is evident in a review of expenditures of the foundation budget category "books and equipment", which includes: textbooks; supplies for teachers, support staff and supervisory staff; and administrative and instructional technology. The overall increase in these expenditures from FY93 to FY97 was \$2.4 million, or 126 per cent. This more than doubled the expenditures per student from \$137.11 in FY93 to \$275.86 in FY97. Examining the textbook accounts separately shows a similar pattern, with a huge increase recorded in FY97 due to the special \$838,000 purchase of three selected reading series designed to improve reading scores in grades K-8.

However, despite its significant expenditures for textbooks and equipment, LPS did not meet the foundation target level of spending for any year from FY94 through FY96 as discussed in section 7 of this report and shown in Appendix B.

Annual expenditures for "books and equipment" as defined in the foundation budget categories and those for textbooks only are shown in *Chart 19*.

Chart 19

**Lowell Public Schools
Expenditures on Books and Equipment**

in \$000s

	FY89	FY93	FY94	FY95	FY96	FY97	FY93 - FY97	
							\$ Incr.	% Incr.
High School	256	404	230	326	324	640	236	58%
Middle School	301	268	262	352	529	1,065	797	297%
Elementary School	557	640	273	424	783	1,179	539	84%
Special Education	92	218	270	151	637	297	79	36%
Bilingual	47	78	78	115	88	100	22	28%
Distributed Systemwide	103	328	53	257	771	1,091	763	233%
TOTAL	\$1,356	\$1,936	\$1,166	\$1,625	\$3,132	\$4,372	\$2,436	126%
Textbooks only	\$453	\$800	\$214	\$521	\$698	\$1,675	\$875	109%
in actual \$								
Expenditures/Student	\$99.52	\$137.17	\$80.75	\$109.96	\$203.50	\$275.89	\$138.72	101%
Textbook Expend./Student	\$33.25	\$56.68	\$14.82	\$35.26	\$45.35	\$105.70	\$49.02	86%

Note: Data obtained from Schedule 1 and 3 of DOE's end of year reports.

16. Test Scores

Lowell test scores show mixed results. Generally they are significantly below state averages but some improvement over time is evident when test scores are examined in some detail.

The LPS participate in a variety of testing opportunities, both state mandated testing programs such as the Massachusetts Educational Assessment Program (MEAP) and Iowa tests, and voluntary programs such as the California Achievement Test 5 (CAT5), now referred to as Terra Nova.

CAT5/Terra Nova

The CAT5 and Terra Nova (formerly CAT5) tests for the years 1995, 1996, and 1997 provide a longitudinal view (same student component for three consecutive years) of results as well as individual grade growth over three testing cycles (different student component by year). The outcomes are displayed in Appendix D1 by way of "mean grade equivalent" (M.G.E.), a score that indicates the grade level most typical for groups of students who achieve this mean

achievement level. The graph of these results in Appendix D2 provides a clear visual of subject areas and grades where students are performing below grade level, namely "total reading" in grades five through eight. It also highlights those areas that show continued improvement over the three year span, such as "total math" in grades four through nine. The results of the CAT5 and Terra Nova were integrated in the individual School Improvement Plans where achievement needs were identified and addressed.

Scholastic Aptitude Tests (SAT)

Scholastic Aptitude Test scores are below the state average, as shown in *Chart 20*. Lowell's scores are comparable each year to the statewide average. However, scores from 1994 and 1995 should not be compared to 1996 since SAT scores were "recentered" in 1996 resulting in a higher score for that year for all schools.

Chart 20

Scholastic Aptitude Test (SAT)

Lowell SAT Scores	1994		1995		1996	
	Lowell	State Avg.	Lowell	State Avg.	Lowell	State Avg.
Verbal	373	426	363	430	455	498
Math	428	475	412	477	462	496
Total	801	901	775	907	917	994

Lowell - % of State Avg.	88.9%		85.4%		92.3%	
-----------------------------	-------	--	-------	--	-------	--

Note: Data provided by Department of Education and Lowell Public Schools

Massachusetts Education Assessment Program (MEAP)

An overview of the Lowell MEAP scores, provided by the Department of Education, is in Appendix C. MEAP reports scores in two ways: scaled scores which range from 1000-1600 and proficiency levels which are reported as percentage of students in each proficiency level.

In the three grades tested, the percentages of students scoring at the lowest proficiency levels (Below Level 1 or at Level 1) have decreased, but the percentages of students scoring at the highest proficiency levels (Level 3 and Level 4) have not increased except for tenth graders who improved slightly in all subjects but social studies. Proficiency level scores for fourth and eighth grade are shown in *Chart 20* below.

Chart 20a

MEAP Proficiency Scores - Fourth and Eighth Grades

Lowell Fourth Grade	1992			1996		
	Level 1 or below	Level 2	Levels 3 & 4	Level 1 or below	Level 2	Levels 3 & 4
<i>Reading</i>	58%	30%	13%	62%	28%	11%
<i>Math</i>	64%	30%	6%	63%	34%	2%
<i>Science</i>	69%	23%	7%	60%	34%	6%
<i>Social Studies</i>	66%	26%	8%	64%	29%	8%
Eighth Grade	Level 1 or below	Level 2	Levels 3 & 4	Level 1 or below	Level 2	Levels 3 & 4
	Level 1 or below	Level 2	Levels 3 & 4	Level 1 or below	Level 2	Levels 3 & 4
<i>Reading</i>	60%	22%	18%	51%	32%	17%
<i>Math</i>	67%	20%	13%	61%	31%	8%
<i>Science</i>	64%	20%	15%	63%	29%	8%
<i>Social Studies</i>	65%	22%	13%	59%	32%	10%

LPS noted that the number of bilingual students taking the MEAP tests increased between 1988 and 1996 and that as a result students' performance would show very little improvement across the five MEAP tests given over that period. MEAP scores for all grades tested are shown in Appendix C. Reading scores for the fourth grade are shown below in Chart 20b. The scores for fourth grade students are particularly significant because by 1996 these students had experienced Education Reform initiatives in the early stages of formal education. As such, the greatest impact of Education Reform should initially be seen in the performance of these students.

The scaled scores performance of fourth and eighth grade students in Lowell shows little or no improvement in any subject area across the five administrations of the MEAP (Chart 20b). The scaled scores for tenth graders improved slightly in all subjects over two years of administration.

Furthermore, a popular hypothesis advanced in public discussions is that students of urban districts generally score poorly on fourth grade reading tests such as the MEAP test. However, MEAP fourth grade reading scores for various urban areas shown in *Chart 20b* indicate that while Lowell's reading scores declined, a number of similar urban areas show significant test score improvements between 1988 and 1996.

Chart 20 b

**Chart : MEAP Scaled Scores - Fourth Grade
Reading and Mathematics**

<i>District</i> Reading Total	1996 - 1997 Enrollment	1988	1990	1992	1994	1996	Change 88-96
Brockton	15,106	1220	1220	1210	1220	1200	-20
Cambridge	7,793	1200	1220	1240	1260	1230	30
Chicopee	7,320	1210	1240	1250	1270	1270	60
Haverhill	8,244	1230	1250	1310	1310	1280	50
Lowell	15,847	1200	1210	1220	1210	1180	-20
Lynn	13,705	1210	1200	1230	1230	1240	30
Malden	5,031	1240	1290	1280	1320	1310	70
Medford	5,165	1230	1280	1290	1330	1310	80
New Bedford	14,264	1200	1220	1270	1320	1270	70
Quincy	8,455	1240	1280	1320	1330	1310	70
Somerville	5,802	1200	1200	1260	1300	1290	90
Southbridge	2,611	1230	1210	1220	1260	1310	80
Springfield	22,391	1230	1200	1200	1230	1230	0
Ware	1,251	1210	1300	1230	1310	1260	50
Worcester	22,989	1230	1260	1280	1300	1350	120
State		1300			1350	1350	50

<i>District</i> Mathematics Total	1996 - 1997 Enrollment	1988	1990	1992	1994	1996	Change 88-96
Brockton	15,106	1220	1230	1220	1200	1180	-40
Cambridge	7,793	1200	1210	1240	1240	1230	30
Chicopee	7,320	1190	1270	1270	1250	1250	60
Haverhill	8,244	1230	1220	1300	1270	1260	30
Lowell	15,847	1220	1230	1230	1210	1190	-30
Lynn	13,705	1190	1210	1270	1230	1220	30
Malden	5,031	1240	1240	1280	1300	1300	60
Medford	5,165	1250	1260	1280	1300	1280	30
New Bedford	14,264	1220	1250	1300	1350	1290	70
Quincy	8,455	1240	1280	1300	1310	1290	50
Somerville	5,802	1180	1210	1240	1250	1260	80
Southbridge	2,611	1220	1220	1240	1250	1240	20
Springfield	22,391	1220	1210	1200	1230	1240	20
Ware	1,251	1240	1230	1200	1260	1250	10
Worcester	22,989	1230	1260	1280	1300	1370	140
State		1300			1330	1330	30

Note: A 50 point change is considered to be statistically significant.

Other Tests

The Iowa Test of Basic Skills grade three reading test was administered throughout Massachusetts in the spring of 1997. Lowell's overall total percentile rank in reading, for all students tested under routine conditions, was 38 - well under the statewide reading rank of 65. The test defines different levels of reading comprehension for students: pre-reader, basic reader, proficient reader and advanced reader. Pre-readers and basic readers made up 49 percent of tested students while proficient and advanced readers made up 51 per cent of all students who were tested in Lowell. About 53 percent of the tested students have attended Lowell schools since the first grade.

The Iowa test of Educational Development, also referred to as the Massachusetts Grade 10 Achievement Test, was also administered in the spring of 1997. It tested seven different areas of skills including reading, quantitative thinking, social studies, etc. Scores were based on a national sample of students who took the test. Lowell's 10th graders scored at the 44th percentile. This compares to scores as high as 89 and as low as 28 for students in other Massachusetts school districts.

17. Hiring and Evaluation of Teachers and Principals

The LPS has a hiring process in place. Principals, along with a team of teachers, interview candidates referred by the personnel office which is under the supervision of the Deputy Superintendent. Screening committees interview candidates for positions reporting to the superintendent. The personnel office keeps all application records in a central location.

The district has an evaluation process in place for principals, administrators and teachers. The evaluation process for teachers is agreed to by union contract, which requires that teachers with professional status have an evaluation at least once every two years. Teachers without professional teacher status are evaluated twice a year and receive written reports on or before December 15th and March 15th. Administrators, represented by the Lowell School Administrators' Association (LSAA), have a similar process, except that personnel without professional status receive at least one written evaluation each year on or before March 15. Principals are evaluated annually. Training in staff evaluation is provided in the form of sessions devoted to the subject in the annual two day orientation meetings for all staff and the monthly leadership academy program which included several sessions devoted to the subject.

Evaluation Process

Principals - All principals are evaluated by the Superintendent using a twelve page "Professional Evaluation Report" divided into eight performance areas. These areas encompass a total of thirty performance standard statements. A principal receives a rating for each of these standards as well as an overall performance rating. Ratings range from "S" (Principal's performance meets or exceeds the standard) to "U" (Principal's performance does not meet the standard, is unsatisfactory and must be improved).

This instrument was used in the 1996-97 school year and according to the Superintendent, all principals received an "S" rating from him. He alone did the evaluations. The tool is comprehensive, but it is noted that it does not include specific numerical standards nor are test scores specifically mentioned in the tool. Due to the complexity of the evaluation tool, the Superintendent advised the audit team that he plans to use "contributing evaluators" in the 1997-98 school year to assist him in the evaluation process.

The audit team noted that, although evaluation systems and processes are in place, performance may not be strongly considered in annual contract negotiations for individual principals since the salary level is predetermined according to the academic degree level achieved by the principal as well as type of school and the number of students in the school. However, the Superintendent advised the audit team that one principal's contract was not renewed during the FY93-FY96 audit period due to performance issues. Since 1993, eleven principals have left the LPS system, six retired and five left to take other positions. Two principals have been hired from outside the LPS system.

Administrators - A similar but less comprehensive performance evaluation tool is in place for administrators. They are evaluated according to performance standards in six broad areas which are also included in the principals' evaluation tool. A matrix of responsibility is in place indicating the primary evaluator for each position. The primary evaluator is the supervising manager of the administrator. Contributing evaluators may be used as well to assist in the evaluation. The evaluation tool is also a standard tool and does not appear to vary in content for different performance expectations from different administrators.

Teachers - Eighteen performance standards in seven broad areas make up the teacher evaluation tool. Teachers are evaluated by one primary evaluator who is usually the principal.

Chart 21 provides an overview of the areas used in the evaluation tools for principals, administrators and teachers.

Chart 21

Performance Evaluation Process

<u>Areas of Evaluation in Evaluation Tool</u>	<u>Administrator</u>	<u>Principals</u>	<u>Teachers</u>
Effective Instructional Leadership	Yes	Yes	
Effective Organizational Leadership	Yes	Yes	
Effective Administration & Management	Yes	Yes	
Promotion of Equity and Appreciation of Diversity		Yes	Yes
Effective Relationships with the Community	Yes	Yes	
Fulfillment of Professional Responsibilities	Yes	Yes	Yes
Managerial Effectiveness		Yes	
Planning Effectiveness		Yes	
Currency in the Curriculum			Yes
Effective Planning & Assessment of Curriculum and Instruction			Yes
Effective Management of Classroom Environment			Yes
Effective Instruction			Yes
Promotion of High Standards and Expectations for Student Achievement			Yes
<i>Overall Performance Rating</i>	Yes	Yes	Yes

18. Accounting and Reporting

The audit team traced the expenditures reported to the Department of Education through the records of the school department to the records of the city auditor. The end of year reports were found to be an accurate presentation of the expenditures of the Lowell Public Schools. In addition, the pupil numbers on this report were traced to the attendance records maintained by the school department at the high school for all schools. The audit team found the end of year report to be accurate.

19. Review of Expenditures

The audit team reviewed the purchasing and expenditure review systems of the Lowell Public Schools. With few exceptions all purchasing is through the city's purchasing department. The Purchasing Agent either uses state-negotiated contracts, or bids certain purchases himself once a year. The exceptions to this system are leases, computer repairs (the computers themselves are procured through state contracts) and contracts for special education. The LPS has two leases for space: one is for the Parent Information Center/ Administrative Offices at 155 Merrimack St.; the other is for portable classrooms at the Daley School. Both of the leases went through a competitive bid process with the School Committee acting as the procurement committee.

The audit team reviewed the process by which invoices are reviewed for payment. The school business office, the purchasing agent and the city auditor review all invoices before payment. The team reviewed a sample of expenditures by the LPS and found no questionable expenditures.

SIGNIFICANT EDUCATION MILESTONES AND ISSUES

20. High School Accreditation

In October, 1994 the Commission on Public Secondary Schools (commission) issued a report of the evaluation of Lowell High School and voted to place the school on warning based on school and city failure to resolve a number of issues. The report included a series of recommendations.

The recommendations covered twenty-four areas of interest ranging from curriculum and instruction to assessment of educational progress. They covered such areas as science, mathematics and languages, art, business, home economics as well as non-course related subjects such as facilities, school climate and community support and involvement.

Recommendations were made in each area and included the following among others:

- Include a goals statement related to the integration of technology throughout all curriculum areas.
- Provide departmental leadership to insure effective curriculum development, implementation and review.
- Revise the organizational structure so that all building personnel report to and are ultimately supervised by the headmaster.
- Provide for increased security in remote areas of the facility.
- Refurbish science laboratories.
- Repair roof leaks in the Lord Building.
- Provide secured storage areas throughout the school.

These are only a few of the 217 recommendations in the report. The recommendations included areas such as school philosophy, physical plants, curriculum, staffing, student activities, technology and management. In October 1996, the LPS issued a progress report on the status of the recommendations. Since the \$40 million renovation of the high school (which addressed many of the issues) was not completed, the status of many of the recommendations was considered to be "in progress." However, many had been addressed. The LPS has also put \$6 million into technology at the high school ("\$700,000 has been placed aside to train staff on current instructional technologies").

The following chart identifies the areas and the number of recommendations in the report and their status.

Chart 22

Lowell High School
Status of Recommendations as of October, 1996

Area of Recommendation	Total	Completed	In Progress	Planned for The Future	Not Addressed
Philosophy	10	10			
Curriculum and Instruction	15	3	12		
Art	2	1	1		
Bilingual Education	14	2	10	2	
Business	4	1	3		
English	12	4	7	1	
Foreign Languages	10	1	7	2	
Health	3		1	1	1
Industrial Technology	8	4	3	1	
Home Economics	3	1	2		
Mathematics	7	2	5		
Music	3	2			1
Physical Education	7	3	1	3	
Social Studies	8		8		
Science	9	1	8		
Special Education	22	7	15		
Student Activities	4	2	2		
Student Services	10	3	4	3	
Educational Media Services	11	1	9	1	
Administration, Faculty and Staff	8	3	4	1	
Facilities	29	9	20		
Community Support and Involvement	4	3	1		
School Climate	2	1	1		
Assessment of Educational Progress	12	3	9		
Total Recommendations	217	67	133	15	2

After the audit field work had been concluded, the auditors received a status report indicating that and additional 97 recommendations have been addressed which would bring the total number of completed actions to 164, rather than the 67 shown in Chart 20A.

21. Transiency Issue

Transiency is defined as students who enter and or leave the system after the first day of school divided by the enrollment as reported on the October 1, 1996 Enrollment Report. In Lowell, 26 percent of the students in 1997 were transients. In comparison, for the same time period, Brockton had a transiency rate of 37 percent, Malden had a rate of 36 percent, Everett 17 percent, Revere 24 percent, and Somerville 27 percent. School officials state that transiency disrupts learning and interrupts the continuity of instruction in the classroom.

22. Voluntary Desegregation and Enrollment Process

Since 1987 Lowell schools have operated under a consent decree to desegregate schools in compliance with Chapter 636 of the Acts of 1974. Under the decree, the LPS established a Parent Information Center to oversee and manage the enrollment of new students into Lowell schools, and divided the school district into certain geographic zones. Originally two zones were created, then a third citywide zone was added. The first two zones are different geographic areas of the city. All zones contain a number of elementary and middle schools. Since there is only one high school, zoning does not apply.

All students coming into the elementary and middle schools register at the Parent Information Center. At the time of registration, each student takes a reading test and parents select a school of their choice. The student will attend that school if there is a slot available and if it is in the geographic zone where the family lives. Alternatively, parents may also pick a school from the citywide zone. The citywide zone includes certain elementary schools and the city's two magnet schools, all of which may draw students from the entire city.

All elementary schools cover K-4 with the exception of the Arts Magnet School and City Magnet schools (grades K-8) and the Demonstration School (grades pre K-4). Each elementary school uses a certain "theme" such as technology, the arts, the humanities. The core subjects of reading and mathematics are taught in the overall context of these themes.

23. Special Education (SPED)

Lowell's Special Education student population has remained fairly steady at around 14 percent between 1991-1997. It reached its high point of 15.2 percent in 1996, and a low point of 13.3 percent in 1993 as shown in *Chart 23*. This compares favorably to the state average of 16.8 percent reported by DOE for that year.

Lowell has made an effort to include SPED students in regular classes as much as possible. As a result of this policy, the actual number of students who are "substantially separated" or are provided with instruction out-of-district has decreased from 272 students in 1993 to 171 in 1997, a reduction of 37 percent.

Substantially separate students are students whose education takes place in a setting that is: (1) self-contained within the public school; (2) in an outside placement but in a public school; (3) in a private Chapter 766 approved SPED school day placement; or (4) is a full time residential placement.

Chart 23

Lowell Public Schools Special Education Program (SPED)

School Year Ending	Total Enrollment All Students	Total SPED Enrollment	SPED as % of total
1989	13,625	1,568	11.5%
1990	13,518	1,791	13.2%
1991	13,583	1,849	13.6%
1992	13,844	1,933	14.0%
1993	14,114	1,877	13.3%
1994	14,439	1,962	13.6%
1995	14,778	2,202	14.9%
1996	15,391	2,333	15.2%
1997	15,847	2,318	14.6%

Note: Data obtained from LPS

Lowell's SPED expenditures increased at a rate less than the overall budget increase between FY93 and FY97. SPED expenditures including transportation increased by \$4.2 million or 41 percent while overall school committee funded programs increased by 62.5 percent over that period. *The SPED only expenditures per SPED student increased by 21.3 percent.*

Chart 24

Special Education Budget

Lowell Public Schools
Program School Budget
 in whole dollars

	FY89	FY93	FY97	FY93-97 Inc/(Decr)	% Incr
SPED General Program	7,785,220	9,080,862	13,015,794	3,934,932	43.3%
SPED Transportation	1,000,000	1,123,500	1,404,350	280,850	25.0%
Total	8,785,220	10,204,362	14,420,144	4,215,782	41.3%
Gen. Program Budget/Student		4,628	5,615	987	21.3%

Note: Data obtained from LPS

24. Transitional Bilingual Education (TBE)

With a student population that includes 47 percent of students for whom English is a second language and 18 percent of all students who have only limited English proficiency, the transitional bilingual program plays a large role in Lowell's education program. LPS spent \$5.3 million in FY93 on its TBE program and budgeted \$8.6 million in FY97, an increase of \$3.32 million or 61.6 percent, close to the overall 62.5 percent increase in the school committee budget for that period. TBE enrollment hovered around 2,900 for the 1991-1993 period, reached 3,050 in 1995 and since then has decreased to 2,830 in the 1996-97 school year. The average TBE budget amount per student was \$3,040 in FY97.

The TBE program has a goal of mainstreaming students in three years. *Chart 25* indicates that over 300 students are mainstreamed each year over the last four years. This appears to be approximately 10+ percent of the TBE enrollment as of October each year. Taking into account that students enter and leave the program during the year, LPS reports that the mainstreaming percentage has ranged from a low of 11.9 percent in the 1991-92 school year to a high of 16.3 percent in the 1995-96 school year, still well below the 33 percent rate one would expect to meet the three year mainstreaming goal.

Chart 25

**Lowell Public Schools
Transitional Bilingual Education (TBE)**

School Year Ending	Total Enrollment All Students	TBE Enrollment	TBE %	Number of TBE Students Mainstreamed
1989	13,625	2,800	20.6%	NA
1990	13,518	2,941	21.8%	NA
1991	13,583	2,973	21.9%	273
1992	13,844	2,908	21.0%	241
1993	14,114	2,968	21.0%	263
1994	14,439	3,040	21.1%	320
1995	14,778	3,050	20.6%	312
1996	15,391	2,915	18.9%	331
1997	15,847	2,830	17.9%	309

FINDINGS OF BEST PRACTICES

25. Planning Process

The school improvement planning process at Lowell appears well designed and managed. Instructions are uniform and clear, and they require measurable objectives including financial data. Each school's plan is required to include an addendum addressing test scores and steps to be taken to improve them. Staff from the central office monitors progress made during the school year and conducts site visits to evaluate activities under the plan. The planning process appears to be taken seriously and the school improvement plans are used as a management tool to guide operational activities in schools.

26. School Building Program

Lowell has undertaken a major school construction and renovation program as part of a three pronged effort to improve Lowell schools. The voluntary desegregation agreement resulted in a revamped enrollment process, the school construction program was to create the improved building infra- structure so the new educational program could be introduced in a learning friendly environment with the latest technical arrangements.

LPS will have spent \$170 million when the \$40 million high school renovation project is completed. Even with the 90 percent state aid available to Lowell for these projects, the City

committed over \$17 million of its own money to improve school facilities. As a result of this effort Lowell has ten new schools and five renovated schools including the high school with up-to-date equipment and computer laboratories, libraries and media services including a television studio at the high school. Particular care was taken in planning the high school renovation to include space for teachers to meet and work. The space appears designed to provide both the facilities and atmosphere of a professional development and learning center.

27. Dropout Prevention and Recovery Program

The Lowell Public School system has implemented a dropout prevention and recovery program. The program is the result of one of the efforts undertaken under the voluntary desegregation plan adopted by Lowell in 1988. The program aims to prevent students from dropping out of school and bring students who have dropped out back into a learning environment.

The first stage of the program is an exit interview at the high school by guidance counselors when a student indicates he is planning to leave school before graduation. In addition, the school department identifies all students who have dropped out in the last three years and interviews them to determine whether they want to return to school. They send invitations to the students, telephone them, and in certain circumstances, the attendance officers visit them at their residence.

Since the high school is the same setting from which the students left school, the school system has established alternative programs for the returning students. An alternative school has been established which holds classes at non-traditional times of the day to accommodate those students that have full-time jobs. In conjunction with Middlesex Community College, the school department had established the Middlesex Academy, where students could obtain their high school diplomas and receive other training. The Academy also operated at different times and in a different setting to promote the return of students while 100 students could be accommodated at the academy at any given time. In 1994, the Academy was established as a Charter School and is operated with City funds, but is no longer under the jurisdiction of the school department. The Academy now issues its own diplomas. At the same time, a partnership has been established with UMASS-Lowell which provides professional training for the school department. The exit interview process has been expanded and extended to the middle schools.

Lowell's program has been very successful as evidenced by its drop-out rate of 2.6% in 1996, compared to the state average of 3.4%. Its rate also compares very favorable to other urban school systems as shown in chart 26.

Chart 26

**School Drop-out Rates
Urban Areas**

	1992-93	1993-94	1994-95	1995-96	1996-97
Lowell	3.1%	3.3%	2.8%	2.6%	3.1%
State	3.5%	3.7%	3.6%	3.4%	3.4%
Boston	7.6%	7.5%	8.1%	7.2%	8.4%
Brockton	9.0%	8.3%	8.4%	7.3%	5.7%
Chelsea	8.5%	12.4%	7.4%	6.6%	4.0%
Fall River	8.7%	6.7%	6.1%	8.1%	4.6%
Holyoke	8.3%	9.5%	8.3%	5.5%	9.8%
Lawrence	14.0%	13.8%	8.6%	6.4%	10.4%
Lynn	7.1%	9.3%	7.2%	7.2%	4.3%
Pittsfield	6.4%	6.5%	5.2%	7.0%	6.0%
Springfield	10.2%	6.6%	11.7%	2.6%	5.0%
Worcester	7.4%	8.5%	8.0%	7.5%	6.8%

IV. EMPLOYEE SURVEY

The audit team conducted a confidential survey of all employees of the LPS during the audit to provide a forum for teachers and staff to express their opinions on education in Lowell. Approximately 1,700 questionnaires were delivered to school staff and 571 responses were received and tabulated, a response rate of 34 percent. Areas covered by the survey included the following: 1. education reform; 2. education goals and objectives; 3. curriculum; 4. planning; 5. communications and mission statements; 6. budget process; 7. professional development; 8. supplies; 9. facilities; 10. computers and other education technology.

The survey results indicated that teachers do not seem to have a clear vision of how education reform improves education in the classroom. While 55 percent think that their job has changed because of education reform, only 31 percent believe there has been an improvement in student achievement due to education reform.

The survey also indicated that teachers think that an increase in school funding is tied directly to improvements in education by a ratio of 64 percent affirmative to 11 percent negative, with 25 percent unsure.

Thirty-six percent of teachers think that the improvements in education at the school would have occurred without education reform, 23 percent disagree and 41 percent are unsure. Teachers are more positive about the school district's and their own efforts. One question asked "In your opinion is the school district taking positive steps to improve education?" In response, 73 percent answered either definitely yes or generally yes, while only 14 percent answered in the

negative and 13 percent expressed uncertainty. For the complete survey and results, see Appendix E.

V. SUPERINTENDENT'S STATEMENT - EDUCATION REFORM

As part of this review the superintendent was asked to submit a brief statement expressing the school district's point of view with respect to three areas:

1. school district progress and education reform since 1993
2. barriers to education reform
3. plans over the next 3 to 5 years

The superintendent's statement is included in Appendix F.

VI. APPENDIX

Appendix A -	School Committee Program Budget
Appendix B1 -	Foundation Budget Line Items Targets and Expenditures FY94-97 - Table
Appendix B2 -	Foundation Budget Line Items Targets and Expenditures FY94-97 - Graph
Appendix C1 -	Mass. Educational Assessment Program (MEAP) Test Scores by Grade and Summary prepared by DOE
Appendix D1 -	California Achievement Test (CAT5) - Table
Appendix D2 -	California Achievement Test (CAT5) - Graph
Appendix E -	Employee Survey Results
Appendix F -	Superintendent's Statement on Education Reform Accomplishments, Barriers and Goals

Lowell Public Schools
Program School Budget FY89-97
School Committee Budget
in \$000's

Appendix A

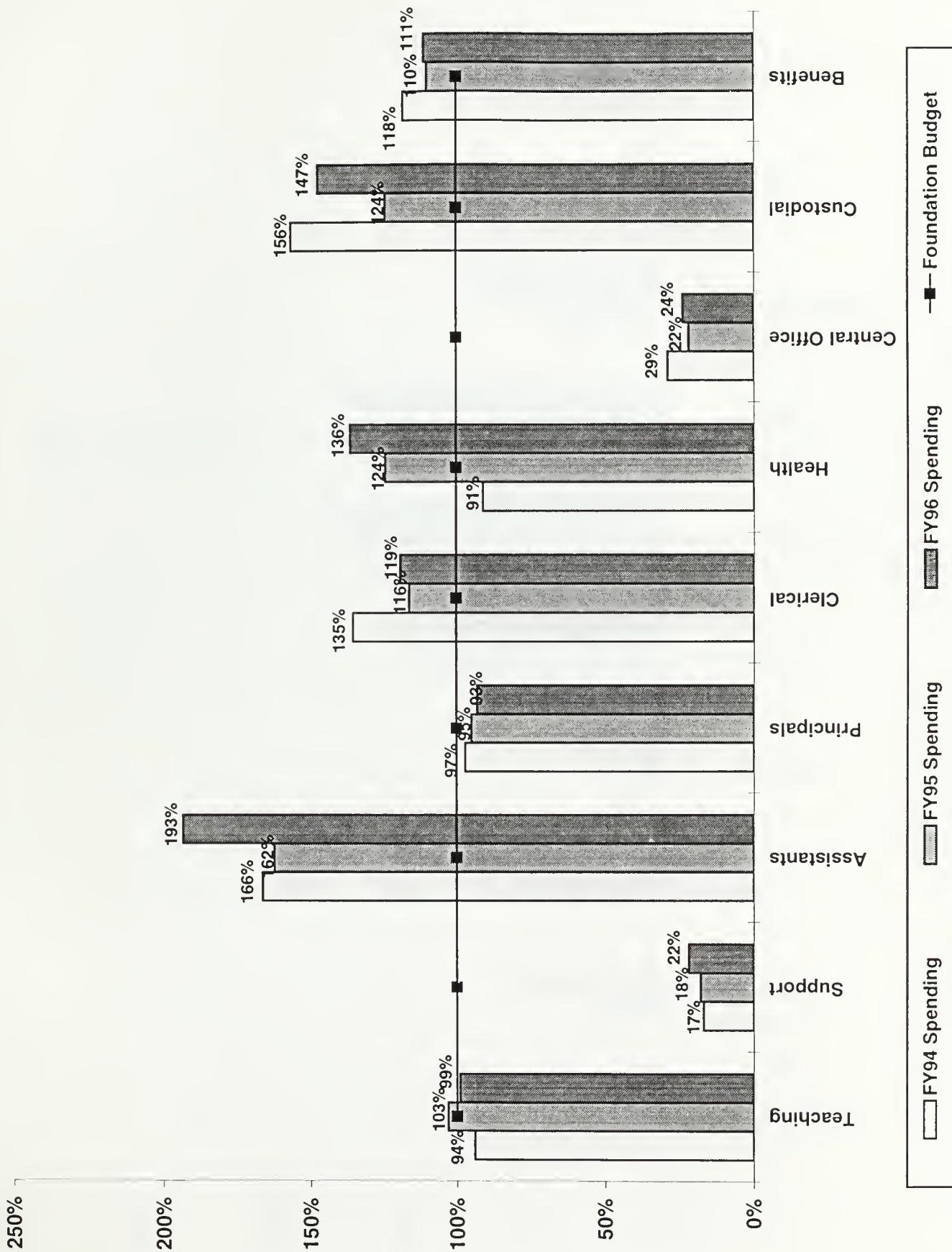
				FY93-97		FY93-97 INCREASE AS %OF
	FY89	FY93	FY97	INC/(DECR	% INCR	\$31 MIL INCR.
School Committee	68	78	140	62	78.8%	0.2%
Superintendent's Office	813	779	1,056	277	35.6%	0.9%
Administrative Support	-	254	422	168	65.9%	0.5%
Principal's Office	2,851	2,741	4,223	1,482	54.1%	4.7%
Instructional Programs	2,080	1,838	2,193	356	19.4%	1.1%
Textbooks	683	624	2,095	1,471	235.8%	4.7%
Elementary Instruction	7,650	7,815	11,114	3,300	42.2%	10.5%
Kindergarten	723	1,020	2,625	1,606	157.5%	5.1%
Art	671	874	1,397	523	59.9%	1.7%
Business Education	382	382	423	41	10.9%	0.1%
Computer Education	55	198	1,721	1,523	768.6%	4.9%
Distributive Education	87	68	87	19	28.3%	0.1%
Driver Education	92	-	-	-		0.0%
English/Reading	1,426	1,361	2,175	814	59.8%	2.6%
Foreign Language	569	423	1,156	733	173.5%	2.3%
Home Economics	438	602	969	368	61.1%	1.2%
Industrial Arts	377	411	670	258	62.9%	0.8%
Mathematics	1,130	1,050	2,180	1,131	107.7%	3.6%
Music	678	809	1,550	741	91.6%	2.4%
Physical Education	1,181	1,357	2,033	676	49.8%	2.2%
Reading	404	-	-	-		0.0%
Science	1,306	1,152	2,653	1,501	130.3%	4.8%
Social Studies	1,077	1,259	1,743	485	38.5%	1.5%
Air Force ROTC	53	53	112	59	111.6%	0.2%
SPED General Prgm	7,785	9,081	13,016	3,935	43.3%	12.5%
Talented & Gifted	54	50	90	40	80.0%	0.1%
Bilingual Program	3,667	5,324	8,603	3,279	61.6%	10.5%
Professional Developme	-	-	1,248	1,248		4.0%
Adult & Comm. Ed.	269	274	356	81	29.6%	0.3%
Data Processing	74	-	-	-		0.0%
Special Programs	-	69	-	(69)	-100.0%	-0.2%
Library Services	240	451	1,127	676	149.8%	2.2%
Audio Visual Services	12	12	7	(6)	-47.6%	0.0%
Guidance Services	906	585	1,137	552	94.3%	1.8%
Attendance Services	70	34	83	49	141.6%	0.2%
Pupil Transportation	1,552	1,881	2,362	481	25.6%	1.5%
SPED Transportation	1,000	1,124	1,404	281	25.0%	0.9%
Food Services	31	-	-	-		0.0%
Athletics	307	169	511	342	203.0%	1.1%
Other Student Activities	30	31	64	32	103.8%	0.1%
Operation and Maintena	4,441	4,558	6,887	2,329	51.1%	7.4%
Insurance Programs	2,128	4,020	4,934	914	22.7%	2.9%
Rental/Bldgs. & Equipm	351	519	311	(208)	-40.1%	-0.7%
Capital Outlay	175	208	375	168	80.7%	0.5%
Suspense	-	-	360	360		1.1%
Total	47,883	53,536	85,912	32,375	60.5%	
Total Adjusted for:						
Transp., Capital Outlay						
and Adult Education	44,888	50,050	81,414	31,365	62.7%	100.0%

**Lowell Public Schools
Foundation Expenditures and Budgets**

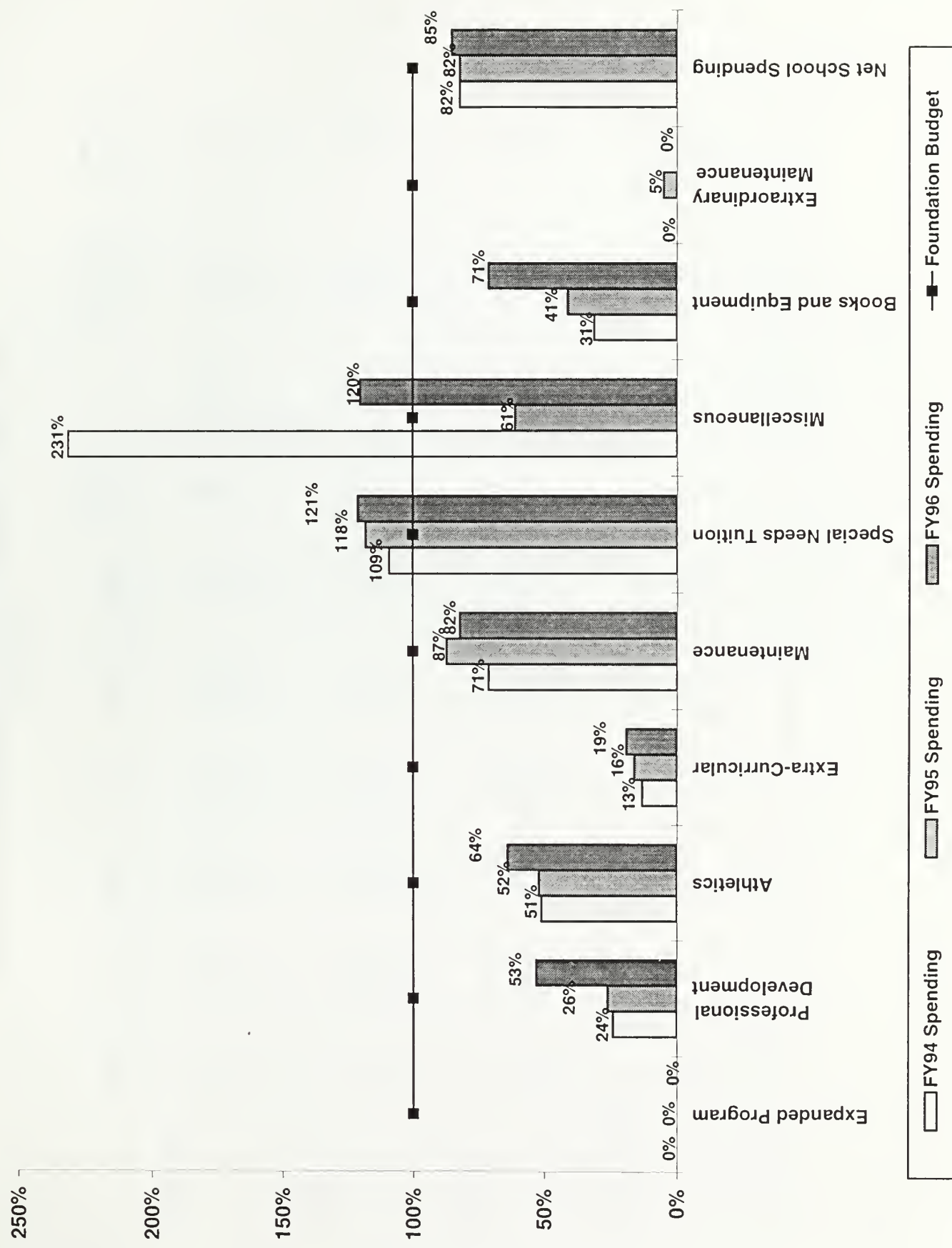
	Reported Expenditures		***Foundation Budget		Variance	
	*FY94	**FY95	FY94	FY95	Expend. over/under Foundation	FY96
Teaching Salaries	33,232	38,450	42,850	37,456	43,413	-563
Support Salaries	1,560	1,745	2,284	9,613	10,472	-8,188
Assistants' Salaries	2,495	2,534	3,327	1,564	1,727	1,600
Principals' Salaries	2,544	2,657	2,874	2,784	3,076	-202
Clerical Salaries	2,126	1,924	2,197	1,665	1,840	357
Health Salaries	553	787	954	636	703	251
Central Office Salaries	731	599	719	2,682	2,966	-2,247
Custodial Salaries	4,545	3,825	5,228	3,097	3,545	1,683
Total Salaries	47,786	52,521	60,433	59,497	67,742	-7,309
Benefits	9,200	9,095	10,480	8,287	9,414	1,066
Expanded Program	0	0	0	1,956	2,277	-2,843
Professional Development	318	369	857	1,330	1,617	-760
Athletics	279	309	435	544	677	-242
Extra-Curricular	49	66	82	383	439	-357
Maintenance	2,720	3,543	3,826	4,072	4,647	-821
Special Needs Tuition	1,934	2,211	2,473	1,767	2,052	421
Miscellaneous	2,934	822	1,771	1,269	1,477	294
Books and Equipment	1,165	1,624	3,132	3,719	4,385	-1,253
Extraordinary Maintenance	0	144	0	2,544	3,086	-3,086
Total Non-Salaries	9,399	9,088	12,576	18,621	21,223	-8,647
Net School Spending	66,385	70,704	83,489	81,277	98,379	-14,890

* FY94 expenditures taken from End of Year Report filed with DOE via crosswalk. This amount is Net School Spending according to Foundation Budget Categories
 ** FY95 and FY96 expenditures taken from End of Year Reports filed with DOE. These amounts are Net School Spending according to Foundation Budget Categories
 ***Amounts taken from DOE's FY Foundation Budget Final Version for Lowell.

Spending as a Percentage of the Foundation Budget : FY94 - FY96 *Lowell: Salary Categories*



Spending as a Percentage of the Foundation Budget : FY94 - FY96 *Lowell: Non-Salary Categories*



Lowell Public Schools
Massachusetts Educational Assessment Program (MEAP) Scores
1988-1996

	Grade	1988	1990	1992	1994	1996	1988-96		1996 State Average	Lowell vs State Avg
							Change	%		
Reading	4	1200	1210	1220	1210	1180	-20	-1.7%	1330	-150
	8	1200	1190	1210	1260	1230	30	2.5%	1380	-150
	10	NA	NA	NA	1220	1230			1310	-80
Math	4	1210	1230	1230	1210	1190	-20	-1.7%	1330	-140
	8	1220	1210	1210	1220	1200	-20	-1.6%	1330	-130
	10	NA	NA	NA	1230	1240			1310	-70
Science	4	1200	1220	1210	1220	1210	10	0.8%	1360	-150
	8	1200	1190	1200	1190	1180	-20	-1.7%	1330	-150
	10	NA	NA	NA	1200	1240			1310	-70
Social Studies	4	1200	1200	1210	1220	1200	0	0.0%	1340	-140
	8	1210	1200	1190	1220	1190	-20	-1.7%	1320	-130
	10	NA	NA	NA	1240	1240			1300	-60

Note: Test was not given to all grades in all years as indicated by NA. Data obtained from Department of Education.

MEAP SCORES - LOWELL

The Massachusetts Educational Assessment Program was a biennial curriculum assessment that tested reading, mathematics, science and social studies at grades 4, 8 and 12 in 1988; in 1994 the secondary grade tested was moved from grade 12 to grade 10. The last administration of this program was 1996. The purpose of MEAP was twofold: to provide data for comparisons; and to provide schools and districts with information that could be used to improve curriculum and instruction.

MEAP reports scores in two ways: scaled scores which range from 1000 to 1600; and proficiency levels which are reported as percentages of students in each level. In 1988, the state average for the scaled scores was determined to be 1300 in all subjects. In subsequent administrations, the state average has risen. Scaled scores are relative to the state average and allow for longitudinal comparisons as well as comparisons between districts. Open-ended question results account for 30% of the total scaled score; multiple choice questions account for the remaining 70% of the scaled scores. A change of fifty or more points in a scaled score is considered educationally significant. This means that there is a noticeable difference in the behaviors and responses of students in a classroom.

In 1992, MEAP began to use proficiency levels as another means of reporting test results. Proficiency levels are descriptive statistics based on external absolutes--the proficiency levels are not relative to other proficiency levels in the state, but based on how students perform relative to external criteria. The proficiency levels range from Below Level 1 (which means that the student did not answer the questions so we do not have enough information on which to make a judgement) to Level 4, the highest level.

GRADE 4

Scaled Scores

- The scaled scores for fourth grade reading have remained relatively stable across the five administrations of the test in Lowell starting with 1200 in 1988 and closing with 1180 in 1996. The highest scaled score attained was 1230 in 1992; the lowest was 1180 in 1996. The scaled scores for open-ended questions ranged from a high of 1240 in 1992 to a low of 1180 in 1996.
- The scaled scores for fourth grade mathematics have remained somewhat stable over the five administrations starting with 1220 in 1988 and ending with 1190 in 1996. The highest score for mathematics was 1230 in 1992 and 1994; the lowest score was 1190 in 1996. The scaled scores for open-ended mathematics questions were 1240 in 1992, 1210 in 1994, and 1190 in 1996.
- The scaled scores for fourth grade science started at 1200 in 1988 and ended with 1210 in 1996. The highest scaled score was 1220 in 1990 and in 1994; the lowest was 1200 in 1988. The scaled scores for open-ended science were 1230 in 1992, 1240 in 1994, and 1200 in 1996.

- The scaled scores for fourth grade social studies started at 1200 in 1988 and ended at 1200 in 1996. The highest score attained was 1220 in 1994, the lowest was 1200 in 1988, 1990, and 1996. Scaled scores for open-ended questions were 1230 in 1992, 1220 in 1994, and 1200 in 1996.
- In 1996, in reading and social studies, fourth graders scored below their comparison score bands, while in mathematics and science, fourth graders scored at the low end of their score bands. A comparison score band is a range of scores that permits a school to compare its results to what it would have scored if it had scored at the average level for its socioeconomic background. The comparison score band for fourth grade reading is 1200 to 1230. The score band show a slight variation for different subjects because the state average for each subject is different.

Proficiency Levels

- In reading, the percentage of students scoring at or Below Level 1 increased from 58% in 1992 to 62% in 1994 and in 1996. Also, the percentage at Level 2 decreased slightly from 30% in 1992 to 29% in 1996. The top levels, 3 and 4, decreased from 13% in 1992 to 11% in 1996.
- The percentage of fourth graders scoring at or below Level 1 in mathematics decreased from 64% in 1992 to 63% in 1996 while the percentage scoring in Level 2 increased from 30% to 34% between 1992 and 1996. In 1992, 6% of the fourth graders scored at or above Level 3 while in 1996, 2% scored there.
- 69% of the Lowell fourth graders scored at or below Level 1 in 1992 in science while 60% scored in the two lowest categories in 1996. In 1992, 23% scored at Level 2 and in 1996 34% achieved a score of Level 2. A slight decrease of one percent from 7% to 6% occurred at Levels 3 and 4 between 1992 and 1996.
- Sixty-six percent of the Lowell fourth graders scored at or below Level 1 in 1992 while in 1996, 64% fell into the same categories in social studies. Level 2 increased from 26% in 1992 to 29% in 1996. In 1992 and 1996, 8% of the fourth graders scored at levels 3 and 4 in social studies.

GRADE 8

Scaled Scores

- Reading scores for eighth graders have risen from 1200 in 1988 to 1230 in 1996. The highest reading score attained by Lowell eighth graders was 1260 which they achieved in 1994. The lowest reading score they received was 1190 in 1990. Scaled scores for open-ended reading questions have risen from 1210 in 1992 to 1250 in 1996.
- Scaled scores for eighth grade mathematics have dropped from 1220 in 1988 to 1200 in 1996. Open-ended scores in mathematics were 1200 in 1992 and 1200 in 1996 as well.

- Science scaled scores for Lowell eighth graders have dropped from 1200 in 1988 to a low of 1180 in 1996. Scores for open-ended questions in science have dropped from 1200 in 1992 to 1170 in 1996.
- Social studies scaled scores have dropped from 1210 in 1988 to 1190 in 1996. Open-ended scores in social studies have remained at 1200 in 1992 to and in 1996.
- In all subjects and in all administrations, eighth graders in Lowell either scored above their comparison score bands or in the high end of their score bands. The eighth graders never scored in the middle, the low end or below their comparison score bands.

Proficiency Levels

- In 1992, 60% of the eighth graders scored in the bottom two proficiency levels, e.g. Below Level 1 and Level 1 in reading. In 1996, 51% of the Lowell eighth graders fell into these categories. The percentage of students scoring at Level 2 increased from 22% in 1992 to 32% in 1996. The percentages of Lowell eighth grades at Levels 3 and 4 in reading was 18% in 1992 and 17% in 1996.
- In Mathematics, 67% of the eighth graders scored at Level 1 or Below Level 1. In 1996, 61% scored in those same categories. The percent of students scoring at Level 2 increased from 20% in 1992 to 31% in 1996. Thirteen percent of the Lowell eighth graders scored at Levels 3 and 4 in 1992 while 8% scored at levels 3 and 4 in 1996.
- Sixty-four percent of the Lowell eighth graders scored at Level 1 or Below Level 1 in science in 1992. In 1996, 63% of the eighth graders scored at the two lowest levels. The percent of students scoring in Level 2 rose from 20% in 1992 to 29% in 1996. At the two highest levels, 3 and 4, the percent decreased from 15% in 1992 to 8% in 1996.
- In 1992, 65% of the eighth graders in Lowell scored at Level 1 or Below Level 1 in social studies. In 1996, 59% of the eighth graders scored in the same levels. The percent of students achieving Level 2 in social studies increased from 22% in 1992 to 32% in 1996. In 1992, 13% of the Lowell eighth graders scored in Levels 3 and 4; in 1996, 10% of the eighth graders scored there.

GRADE 10

Scaled Scores

- Massachusetts began testing tenth graders in 1994. This report will only deal with tenth grade scores or those scores that have occurred since the Education Reform Law of 1993. Please note that only two years of scores are available so the changes made over five administrations at grades 4 and 8 will not be evident in two administrations.
- Scaled scores for reading at grade 10 rose from 1220 in 1994 to 1230 in 1996. Scaled scores for open-ended reading questions also rose from 1170 in 1994 to 1210 in 1996.

- Tenth grade scaled scores for mathematics rose 10 points from 1230 in 1994 to 1240 in 1996. At the same time, scaled scores for open-ended questions rose from 1180 in 1994 to 1210 in 1996.
- Science scaled scores rose 40 points for tenth graders from 1200 in 1994 to 1240 in 1996. Scaled scores for open-ended questions rose 50 points from 1170 in 1994 to 1220 in 1996.
- In social studies, tenth graders scored 1240 in 1994 and 1996. Social studies open-ended question scaled scores rose 20 points from 1190 in 1994 to 1210 in 1996.
- In 1994, in reading, mathematics, science and social studies, tenth graders scored at the high end of their comparison score bands. In 1996, tenth graders scored above their comparison score bands in all subjects.

Proficiency Levels

- Sophomores scoring in Level 1 and Below Level 1 in reading decreased from 57% in 1994 to 53% in 1996. The percent achieving Level 2 increased from 27% in 1994 to 29% in 1996. Sixteen percent of the tenth graders scored in Level 3 or Level 4 in 1994, and 18% of the tenth graders scored in Levels 3 and 4 in 1996.
- In mathematics, 56% of the sophomores scored at Level 1 or Below Level 1. In 1996, 52% of the sophomores scored at Level 1 or Below Level 1. In 1994, 28% scored at Level 2 in Mathematics; in 1996, 31% scored at Level 2 in mathematics. Fifteen percent of the sophomores scored in the two highest levels in 1994 while 16% of the sophomores scored at Level 3 and Level 4 in 1996.
- In 1994, 59% of tenth graders scored at Level 1 or Below Level 1 in Science. In 1996, 54% of the sophomores scored there. Twenty-nine percent of the tenth graders achieved Level 2 in 1994 while 32% achieved Level 2 in 1996. The percentage of students who scored in Level 3 or Level 4 increased from 12% in 1994 to 15% in 1996.
- In social studies, 55% of the tenth graders scored at Level 1 or Below Level 1 in 1994 while in 1996, 51% of the sophomores scored in the two bottom levels. Students scoring in Level 2 increased from 26% in 1994 to 33% in 1996. Students achieving the highest levels, Levels 3 and 4, decreased from 19% in 1994 to 16% in 1996.

PARTICIPATION RATES

- In 1988, 35% of the bilingual fourth graders; 27% of the special needs fourth graders; and 98% of the regular education fourth graders were tested. In all, 80% of the fourth graders were tested. In 1996, 74% of the bilingual students were tested; 19% of the special needs students were tested; and 98% of the regular education fourth graders were tested. Eighty-one percent of all fourth graders were tested in 1996.

- In 1988, 16% of Lowell's bilingual eighth graders were tested; 28% of the special needs eighth graders were tested; and 97% of the regular education eighth graders were tested. Eighty-one percent of all eighth graders were tested. In 1996, 55% of the bilingual population were tested and 24% of the special needs eighth graders were tested. Of the regular education eighth graders, 89% took the MEAP. In all, 79% of the eighth graders were tested.
- At grade 10 in 1994, 21% of the bilingual students were tested; 30% of the special education students were tested; and 84% of the regular education students were tested. In all, 73% of the tenth graders took the MEAP in 1994. In 1996, 25% of the bilingual students were tested; 22% of the special needs students were tested; and 90% of the regular education students were tested. In all, 76% of the tenth graders were tested.

GENERAL COMMENTS

- The scaled score performance for fourth grade students in Lowell shows very little improvement in any subject across the five administrations of the MEAP.
- The percentages of Lowell fourth graders scoring in the lowest proficiency levels have decreased (the greatest decrease from 69% to 60%), but the percentages at the highest proficiency levels, levels 3 and 4, have not increased.
- The scaled score performance for eighth graders has been relatively stable over the five administrations demonstrating little or no improvement.
- The percentages of grade 8 students in Lowell who received proficiency level scores of Below Level 1 or Level 1 decreased over the three administrations in which proficiency levels were reported. The percentages of students achieving proficiency levels 3 and 4 decreased slightly over the three administrations as well.
- The scaled scores for tenth graders improved slightly in all subjects over the two years of administration.
- The percentages of tenth graders scoring in the two lowest proficiency levels decreased over the two administrations. The percentages of tenth graders scoring in the highest proficiency levels (3 and 4) increased slightly in all subjects but social studies.

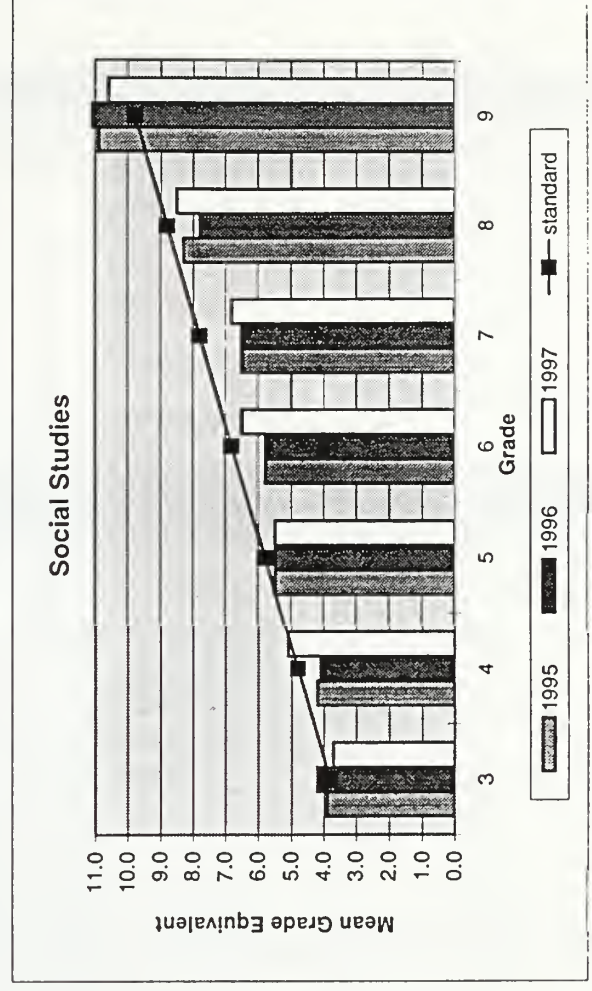
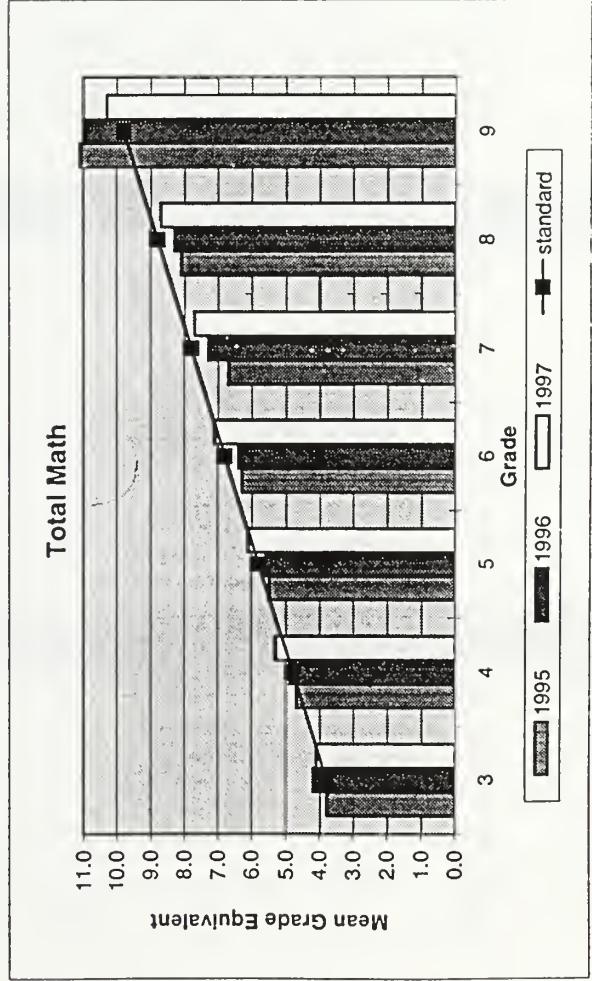
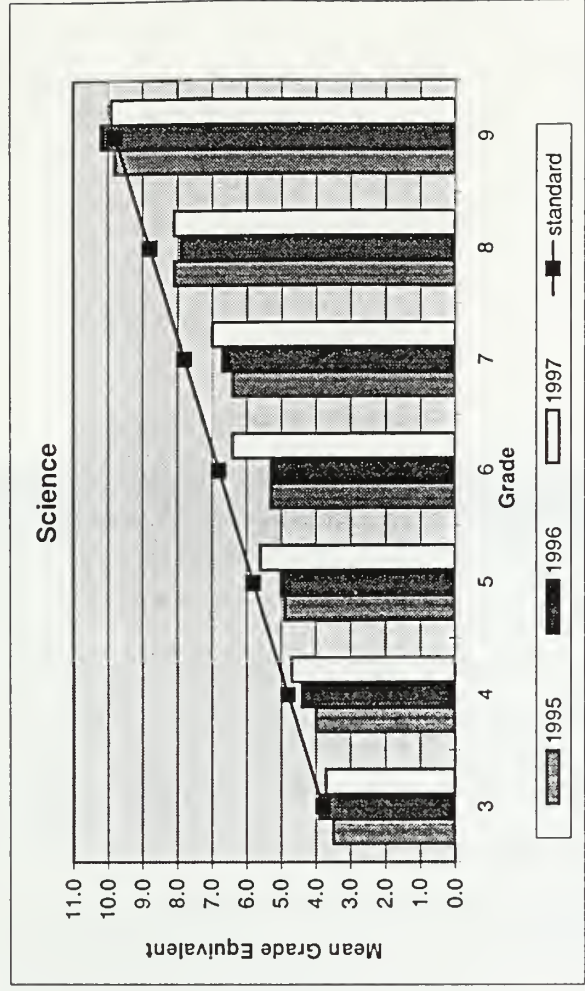
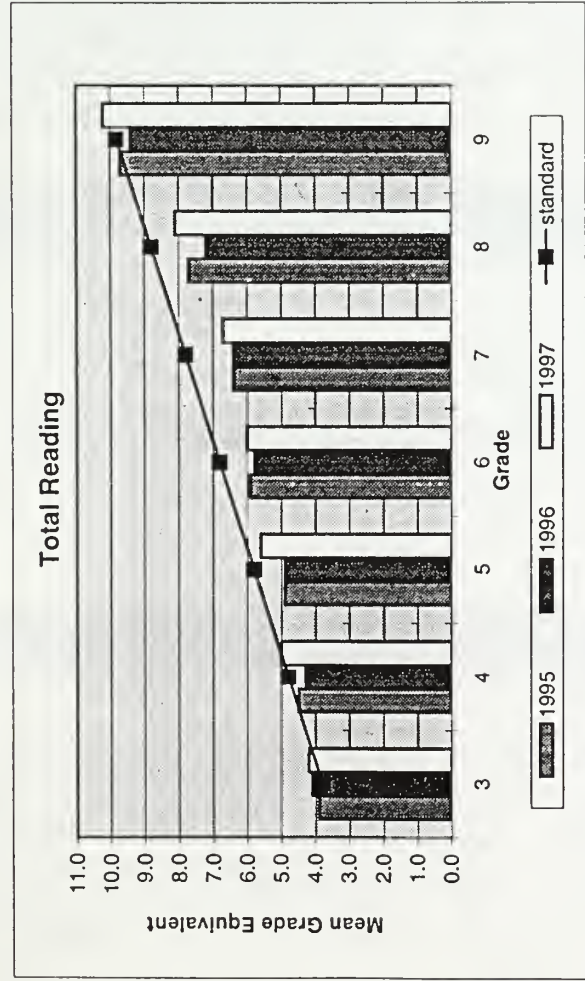
LOWELL DISTRICTWIDE TESTING RESULTS
CALIFORNIA ACHIEVEMENT TEST 5 AND TERRA NOVA

	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
Mean Grade Equivalent	3.8	4.8	5.8	6.8	7.8	8.8	9.8
1995							
Total Reading	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
	3.9	4.5	4.9	5.9	6.4	7.7	9.7
Total Math	3.8	4.7	5.5	6.3	6.7	8.1	11.1
Spelling	3.7	4.9	5.3	6.6	7.3	8.6	11.0
Science	3.5	4.0	4.9	5.3	6.4	8.1	9.8
Social Studies	3.9	4.2	5.5	5.8	6.5	8.3	10.9
1996							
Total Reading	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
	4.1	4.3	4.9	5.8	6.4	7.2	9.4
Total Math	4.2	4.0	5.6	6.4	7.3	8.3	11.0
Spelling	4.0	4.8	5.3	6.6	7.5	8.5	10.9
Science	3.9	4.4	5.0	5.3	6.7	7.9	10.2
Social Studies	4.2	4.1	5.5	5.8	6.5	7.8	11.1
1997							
Total Reading	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
	4.2	5.0	5.6	6.0	6.7	8.1	10.2
Total Math	4.1	5.3	6.1	7.1	7.7	8.7	10.3
Spelling	4.8	5.1	6.3	8.4	8.7	8.4	11.0
Science	3.7	4.7	5.6	6.4	7.0	8.1	9.9
Social Studies	3.7	5.1	5.5	6.5	6.8	8.5	10.6

Note: Mean grade equivalent (MGE) denotes grade and month at which student should be performing

Ex.: Under grade 3, the MGE is 3.8 meaning that the test was given in the eighth month of grade 3. Scores higher than 3.8 for 3rd graders means that students are performing above their MGE.

CAT 5 AND TERRA NOVA GRAPHS
M.G.E. BY GRADE AND SUBJECT FOR 1995, 1996, 1997



EMPLOYEE SURVEY

ALL TEACHERS

Rating Scale		
Yes/No Questions		Opinion
Definitely yes	1	Very good to excellent
Generally yes	2	Generally good
Not sure, one way or the other	3	OK - could be better, could be worse
Generally no	4	Not good, needs some improvement
Definitely no	5	Inadequate, needs major improvement

1 Education Reform		1	2	3	4	5
1.a.	Are you familiar with the issues of Education Reform, the Law passed in 1993?	27%	51%	15%	6%	1%
1.b.	Do you feel you have a good understanding of the purpose and the goals of the law?	21%	52%	17%	7%	3%
1.c.	Do you feel that there is a lot of confusion about what Education Reform is all about?	27%	33%	23%	14%	3%
1.d.	Do you feel the issues of Education Reform are considered when school district plans are made?	20%	40%	28%	9%	3%
1.e.	Do you feel the issues of Education Reform are considered when school-based plans are made?	24%	43%	25%	6%	2%
1.f.	In your opinion is the school district taking positive steps to improve education?	29%	44%	13%	11%	3%
1.g.	Do you feel your job has changed because of Education Reform?	23%	32%	21%	19%	5%
1.h.	Do you think there has been an improvement in student achievement in your school due to Education Reform?	4%	27%	38%	24%	7%
1.i.	Do you think the improvements in education at the school would have happened without Education Reform?	9%	27%	41%	17%	6%
1.j.	Have you perceived an increase in school funding tied directly to improvements in education in your district?	25%	39%	25%	7%	4%

2 Educational Goals and Objectives		1	2	3	4	5
2.a.	Are the school administration's goals and objectives generally clear and understandable?	25%	42%	17%	12%	4%
2.b.	Are you clear about the school district's goals and objectives as they relate to your own job?	18%	43%	21%	13%	5%
2.c.	Are there indicators issued to measure progress toward goals and objectives generally?	17%	37%	30%	12%	4%
2.d.	Are there indicators used to measure your progress toward goals and objectives?	15%	37%	31%	13%	4%
2.e.	Do you have a role in developing these goals and objectives?	16%	38%	19%	18%	9%

3 Curriculum		1	2	3	4	5
3.a.	Do you believe that your district's curriculum is coherent and sequential?	12%	40%	24%	17%	7%
3.b.	Do you believe that your curriculum is challenging and tied to preparing students for life after secondary school?	17%	46%	22%	11%	4%
3.c.	Is there a coherent, on-going effort within the district to keep curriculum current with evolving trends and best practices in pedagogy and educational research?	21%	48%	19%	9%	3%
3.d.	Do teachers play an important role in reviewing and revising curriculum in the district?	20%	40%	24%	10%	6%

EMPLOYEE SURVEY

ALL TEACHERS

Rating Scale		
Yes/No Questions		Opinion
Definitely yes	1	Very good to excellent
Generally yes	2	Generally good
Not sure, one way or the other	3	OK - could be better, could be worse
Generally no	4	Not good, needs some improvement
Definitely no	5	Inadequate, needs major improvement

4	Planning	1	2	3	4	5
4.a.	Is the planning for important issues (e.g. curriculum, budgetary, etc.) within the district a top-down process?	34%	30%	21%	9%	6%
4.a.1.	If the answer is "Definitely yes" (1) or "Generally yes" (2), is there an important role for teachers and professional staff in the planning process?	10%	37%	30%	12%	11%
4.b.	If staff does not have an important role in developing plans, are decisions made by the central office/school committee explained so that you can understand the basis for the decision/policy?	7%	26%	37%	20%	10%

5	Communications and Mission Statement	1	2	3	4	5
5.a.	Is there adequate on-going communication between teachers and district administrators? In other words, do you think that you know what is going on in the district?	8%	21%	29%	27%	15%
5.b.	Is there adequate communication between you and your superiors?	25%	39%	17%	13%	6%
5.c.	Is there a mission statement in place for your school district?	42%	27%	26%	3%	2%
5.d.	Is there a mission statement in place for your school?	61%	25%	10%	2%	2%
5.e.	Does the mission statement define how the school is run, and how students are taught?	37%	34%	21%	4%	4%
5.f.	Are these mission statements applied in the operation of the school and the teaching of students?	32%	34%	24%	7%	3%

6	Budget Process	1	2	3	4	5
6.a.	Do you understand your school budget process?	14%	29%	22%	23%	12%
6.b.	Do you understand how the budget process impacts your department?	18%	37%	19%	18%	8%
6.c.	Is the school budgeting process fair and equitable?	10%	25%	35%	18%	12%
6.d.	Are budgetary needs solicited and adequately addressed in the budget process?	9%	25%	39%	17%	10%
6.e.	Once the budget is approved and implemented, does the allocation and use of funds match the publicly stated purposes?	11%	27%	48%	9%	5%
6.f.	Given the circumstances, the school department seems to be doing the best it can with in the school budget process.	8%	21%	32%	25%	14%
6.g.	Are there deficiencies in this process?	23%	21%	39%	12%	5%

EMPLOYEE SURVEY

ALL TEACHERS

Rating Scale		
Yes/No Questions		Opinion
Definitely yes	1	Very good to excellent
Generally yes	2	Generally good
Not sure, one way or the other	3	OK - could be better, could be worse
Generally no	4	Not good, needs some improvement
Definitely no	5	Inadequate, needs major improvement

7 Professional Development		1	2	3	4	5
7.a.	Is there an adequate professional development program in your school?	34%	38%	9%	15%	4%
7.b.	Is the program designed to meet school needs and tied to the new frameworks and assessments?	33%	39%	15%	9%	4%
7.c.	Is the program designed to change the content of pedagogy in classrooms?	23%	34%	26%	12%	5%
7.d.	Are there deficiencies in the professional development program?	12%	23%	27%	29%	9%
7.e.	Did you participate in the professional development program in 1995/96?	60%	27%	3%	4%	6%
7.f.	Professional development is making a difference and will improve education in my school district.	34%	36%	20%	7%	3%

8 Supplies		1	2	3	4	5
8.a.	Have you generally received sufficient and appropriate supplies to do your job?	20%	33%	11%	18%	18%
8.b.	Have you generally received sufficient and appropriate basic educational supplies (e.g. chalk, paper, pens, pencils, etc.) to do your job?	34%	40%	9%	9%	8%
8.c.	Have you generally been supplied with a sufficient number of a current edition of textbooks?	25%	27%	16%	16%	16%
8.d.	Are students given a copy of these textbooks to keep at home during the year?	43%	28%	7%	11%	11%
8.e.	Have you generally been supplied with sufficient ancillary curriculum materials (e.g. current maps, lab supplies, videos, etc.)?	18%	31%	15%	21%	15%
8.f.	Is the process for obtaining supplies and materials effective, time sensitive and responsive to your classroom needs?	14%	29%	16%	19%	22%

9 Facilities		1	2	3	4	5
9.a.	How would you rate the overall state of school facilities (e.g. cleanliness, security, maintenance, structural integrity)?	25%	30%	16%	19%	10%
9.b.	How would you rate the overall state of classrooms, labs, and other teaching rooms/areas?	23%	36%	18%	14%	9%
9.c.	How would you rate the overall state of the common areas (e.g. hallways, stairwells, and cafeteria)?	22%	35%	21%	14%	8%
9.d.	How would you rate the overall state of the areas outside of the building (e.g. playgrounds, walk-ways and grounds)?	18%	42%	18%	14%	8%
9.e.	Would you agree with the following statement: "The school administration makes an effort to provide a clean and safe working environment."	41%	34%	13%	8%	4%

EMPLOYEE SURVEY
ALL TEACHERS

Rating Scale		
Yes/No Questions		Opinion
Definitely yes	1	Very good to excellent
Generally yes	2	Generally good
Not sure, one way or the other	3	OK - could be better, could be worse
Generally no	4	Not good, needs some improvement
Definitely no	5	Inadequate, needs major improvement

10 Computers and other Educational Technology		1	2	3	4	5
10.a.	Are the usage of computers and other technological tools a significant part of the management practices at the school?	25%	39%	20%	12%	4%
10.b.	Are the usage of computers and other technological tools a significant part of the instructional practices at the school?	17%	34%	20%	24%	5%
10.c.	In terms of student usage, are computers generally available only in a computer laboratory setting or library/media center?	32%	35%	7%	13%	13%
10.d.	How many computers are located in your classroom?	Average = 2 computers				
10.e.	Do you have a school computer provided for and dedicated for your usage?	57%	14%	3%	5%	21%
10.f.	Is there a school computer provided for and shared by you and other teachers?	39%	24%	6%	9%	22%
10.g.	Are there computers available for and used on a regular basis by students?	39%	28%	16%	11%	6%
10.h.	About how many minutes a week does each student use a computer? (Estimated) _____ min.	Average = 45 minutes				
10.i.	Is the number of available computers sufficient for the number of students?	17%	20%	12%	17%	34%
10.j.	Are the computers in good working order?	26%	42%	20%	10%	2%
10.k.	Are the software packages in the computers uniform and consistent with the instructional level to be provided?	20%	37%	24%	11%	8%

LOWELL PUBLIC SCHOOLS

SUPERINTENDENT'S STATEMENT

SCHOOL DISTRICT ACCOMPLISHMENTS SINCE 1993

With the advent of the Massachusetts Education Reform Act of 1993, the Lowell Public School System continues its tradition as a leader in educational reform and a model for educational excellence. The monies received from the Education Reform Act enables the school district to enhance and support its \$171 million school facilities and renovation project. Since 1993, the district has established a state-of-the-art educational technology program, implemented a developmental approach to the teaching of young children, created a professional development plan for all staff members, and furthered its inclusive model of educating all children including those with special needs.

The following highlights the significant changes in the ways in which children are now educated in Lowell's public schools because of the Massachusetts Education Reform Act of 1993.

INSTRUCTIONAL STRATEGIES/CURRICULUM

The district implements the Education reform strategies noted below for ALL students allowing them the opportunity to meet high levels of student performance. Instructional strategies and curricular offerings now:

- | | |
|---|--|
| <ul style="list-style-type: none"> ◆ Provide Preschool through Grade 2. children with developmentally appropriate early childhood instruction. ◆ Provide all kindergarten children with a full day kindergarten experience. ◆ Implement middle school concepts and practices in grades 5 through 8. ◆ Provide special education inclusion opportunities in grades K through 8. ◆ Develop a plan addressing the reading needs of our children that will be implemented in the 1997-98 school year. ◆ Implement CAT5/Terra Nova testing in grades 3 through 9 as a transitional assessment program until the MCAS testing begins. ◆ Implement a Summer reading program that effectively uses school facilities and community agencies. ◆ Revitalize district Library Program. | <ul style="list-style-type: none"> ◆ Begin to align district curriculum guides (Math, Language Arts, Science and Social Studies) with the curriculum frameworks. ◆ Integrate educational technology throughout all grade levels. ◆ Implement a computer network that connects every classroom in each school. ◆ Implement a wide area network connecting computers in every school office with Central Administration. ◆ Implement Internet access to 3,000 student computers. ◆ Program channel 43, the school system's educational television channel. ◆ Implement Library Media Centers at all grade levels. ◆ Provide extended learning time programs including After-School Homework, Enrichment, and Tutorial Centers. |
|---|--|

IMPLEMENTATION OF STRATEGIES FOR MEETING THE DIVERSE LEARNING NEEDS OF CHILDREN

The district implements strategies for meeting the diverse needs of children, including children with special needs, within the regular education program. The district now:

- | | |
|--|--|
| <ul style="list-style-type: none"> ◆ Utilizes resource teachers. ◆ Implements a new reading program. | <ul style="list-style-type: none"> ◆ Implements inclusionary educational practices. ◆ Expands least restrictive environment program. |
|--|--|

ESTABLISH SCHOOL ENVIRONMENTS CHARACTERIZED BY TOLERANCE AND RESPECT FOR ALL GROUPS

Because of the funding received by the Lowell Public School System from the Massachusetts Educational Reform Act of 1993, the district now:

- | | |
|---|--|
| <ul style="list-style-type: none"> ◆ Requires each school to spend \$3 out of every \$10 allotted to it for professional development on issues of equity and equal educational opportunities for all students. | <ul style="list-style-type: none"> ◆ Implements strategies to support the second language (English) learners in regular classrooms. ◆ Provides tutors for second language (English) learners in mainstream classrooms. |
|---|--|

SCHOOL SAFETY AND DISCIPLINE

The school district now implements a variety of strategies that deal with discipline issues including:

- | | |
|--|--|
| <ul style="list-style-type: none"> ◆ Security measures, such as Picture ID's, for all high school students during the 1997-1998 school year ◆ Behavior modification centers in middle schools. | <ul style="list-style-type: none"> ◆ Peer counseling and peer mediation programs in middle schools and high school. |
|--|--|

TRANSITION OF STUDENTS

The school district now implements programs that help students through the transitioning process from:

- | | |
|---|--|
| <ul style="list-style-type: none"> ⇒ Home to Kindergarten. ⇒ Early childhood programs (both public and private) to kindergarten | <ul style="list-style-type: none"> ⇒ From elementary (gr 4) to middle school (gr 5). ⇒ From middle school (gr 8) to high school (gr 9) ⇒ From TBE and/or SPED to mainstream |
|---|--|

PARENT INVOLVEMENT

The school district now augments its parent outreach and involvement efforts by:

- | | |
|---|--|
| <ul style="list-style-type: none"> ◆ Engaging parents (as integral members of the school community) in an inclusive discussion about school issues through each school's School Site Council. ◆ Expanding home/school partnerships. | <ul style="list-style-type: none"> ◆ Expanding parent-teacher conferences. ◆ Expanding its parent outreach programs. ◆ Expanding its parent programs to include workshops on various issues important to parents. ◆ Expanding its Citywide Parent Council. |
|---|--|

PROFESSIONAL DEVELOPMENT

Professional development, now a line item in the district's budget, has been expanded to:

- | | |
|---|--|
| <ul style="list-style-type: none"> ◆ Provide professional activities addressing Art, Music, Physical Education, Family Life/Consumer Science, Industrial Technology, World Language, and Science curriculum development. ◆ Form 4 district-wide Curriculum Guide Revision Teams, involving 40 teachers (grades preK-12) and the Center for Field Studies and Services at UM Lowell, to revise and align existing Curriculum Guides with Curriculum Frameworks. ◆ Create 90 individual school level study groups involving 500 teachers to address the implementation of the Curriculum Frameworks. ◆ Develop/implement a district based Teacher Preparation Program for Provisional teachers. ◆ Develop/implement a plan supporting Provisional/Advanced teachers seeking standard certification. ◆ Develop and distribute a Professional Development Planning Calendar. ◆ Develop and implement with UM Lowell, a mentor training program. ◆ Implement a mentoring program for clinical practice and provisional teachers. | <ul style="list-style-type: none"> ◆ Implement a day-long workshop for substitute teachers. ◆ Provide professional development opportunities for every new grade preK-2 teacher. ◆ Provide professional development opportunities to enhance reading, science, and mathematics teaching practices. ◆ Provide yearly professional development opportunities focused on early childhood, including on site (in classroom) technical assistance with Tufts University staff. ◆ Provide 30 hours of computer training, including 11 hours of curriculum integration, to each (240) Lowell High School teacher and administrator. ◆ Provide training in behavior management. ◆ Provide training that models appropriate practices for Second Language Learners in TBE and regular classes. ◆ Implement a day-long paraprofessional workshop with options for personal development through an Associates Degree in Early Childhood at Middlesex Community College. |
|---|--|

BARRIERS TO OVERCOME TO IMPROVE EDUCATION IN THE DISTRICT

There are three major barriers that Lowell Public Schools must overcome to improve the education of all its children. These barriers include issues involving overcrowding, time on learning, and discipline/school safety.

- ◆ *Overcrowding* – In order to improve education in the district, Lowell Public Schools must reduce the numbers of children assigned to each of its classrooms. Our school district has shown a more than 20% increase in student enrollment over the past 10 years. These children have filled each of our schools, old and new, to capacity. We

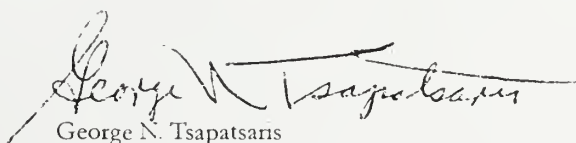
are now averaging 27 children in each of our kindergarten through grade 2 classrooms. In order to give each child the best education available in the school district, teacher/student ratios must be reduced.

- ♦ *Time on Learning* – For Lowell Public Schools to provide its children with the time on learning they need to achieve educational excellence and to meet the state's minimum requirements of 900 hours for elementary school children and 990 hours for secondary school students, the school day for Lowell's children must be lengthened. The amount of time involved in complying with the state's requirements and the monetary cost to the school district has become a sticking point in the on-going contract negotiations between the district and its teacher's union, the American Federation of Teachers.
- ♦ *Discipline/School Safety* – In order to alleviate the perception in our community that discipline and school safety are major issue in our middle schools, Lowell Public Schools will continue to investigate alternative programs that deal with disruptive students.

SCHOOL DISTRICT'S OBJECTIVES FOR THE NEXT THREE YEARS

The Lowell Public School System has identified four specific objectives that need to be accomplished in the next three years in order to improve the education of all its children. These objectives include reducing class size, improving student reading proficiency, completing and implementing the district's curriculum frameworks study guides, and improving school discipline and safety.

- ♦ *Reduce Class Size* – Our classrooms have become increasingly overcrowded as our student population has grown. Because there is no more space left in our physical plants to provide more classrooms, more schools are needed. Consequently, a feasibility study of Phase 3 of our building plan is being done by the City of Lowell. Phase 3 calls for the building of 4 more elementary schools and 2 middle schools. By providing more classrooms, the teacher/pupil ratio will be reduced, and our children will have further opportunities to achieve educational excellence.
- ♦ *Improve Student Reading Proficiency* – Beginning with the 1997-1998 school year, all children new to the school district are assessed for their reading proficiency at the time of registration in order that teachers may have this information as each child enters his/her classroom. Reading specialists assess children's reading levels and skills help classroom teachers develop strategies and techniques that will strengthen students' reading proficiencies. A new reading series for children in grades K-8 has been purchased and is being used in each elementary and middle school.
- ♦ *Complete and Implement Curriculum Frameworks Study Guides* – Districtwide curriculum guide revision study groups will continue to amend their drafts and work toward the development of a final product, the curriculum frameworks study guides. Districtwide curriculum guides, in the content areas of English Language Arts, Mathematics, Science and Technology, and History will be aligned with the Massachusetts Curriculum Frameworks. The amended drafts will be shared with schools, and completed study guides will be in all schools for implementation.
- ♦ *Discipline and School Safety* – The district will implement and evaluate two alternative programs for disruptive middle school students. One of these alternative program, conducted in conjunction with Middlesex Community College, will deal with 25 of the most disruptive middle school students in the district for an extended period of time. The second alternative program instituted by the district will deal with moderately disruptive students for a limited period of time.



George N. Tsapatsanis
Superintendent, Lowell Public Schools

ACKNOWLEDGMENTS

This report was prepared by the Department of Revenue, Division of Local Services.

Project staff included:

Gerard D. Perry
Project Manager

Dieter H. Wahl
Auditor - In - Charge

Donna Demirai
Auditor

F. Ellis FitzPatrick
Auditor

The Division of Local Services would like to acknowledge the professional cooperation extended to the audit team by Lowell School Superintendent George Tsapatsaris, Special Projects Director Rosemary LeBlanc, and the school department staff.
